

**MOBILE RADIOTELEPHONE
MODEL STORNOPHONE 700
TYPE CQM761
TYPE CQM763
420 - 470 MHz**

Storno

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420 - 470 MHz**

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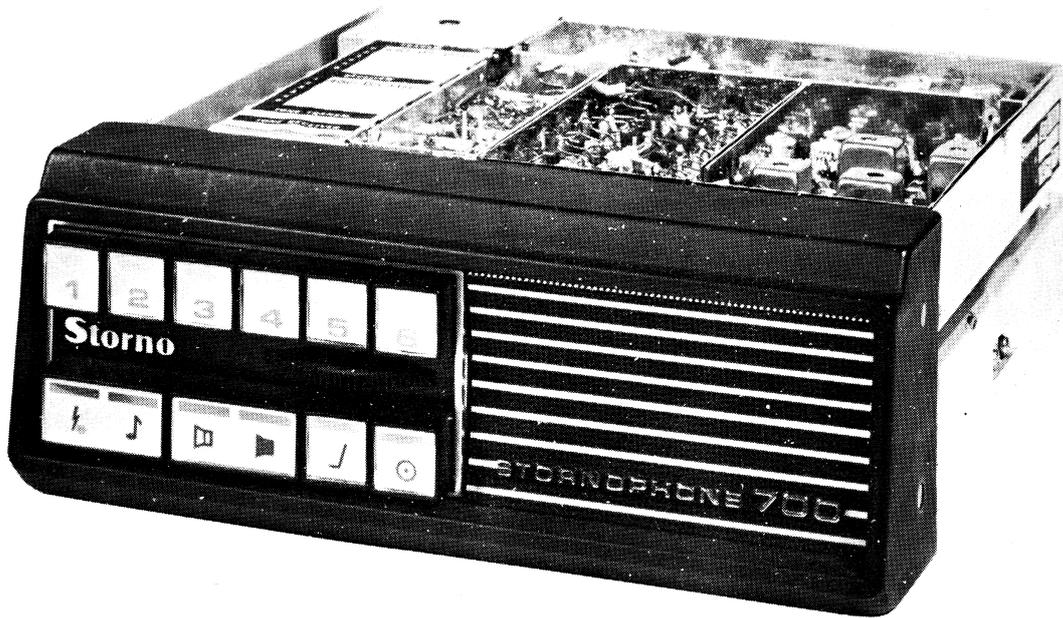
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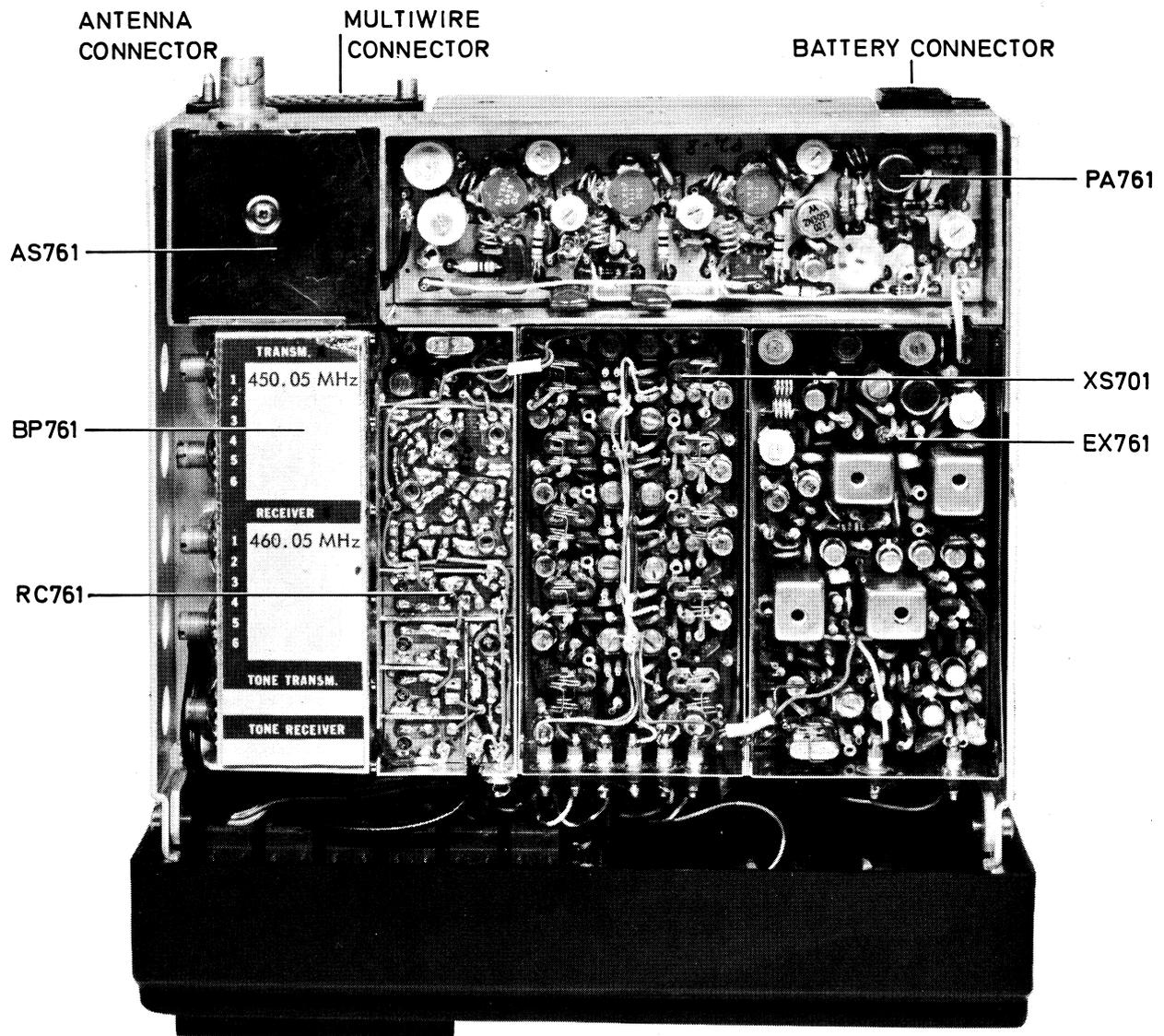
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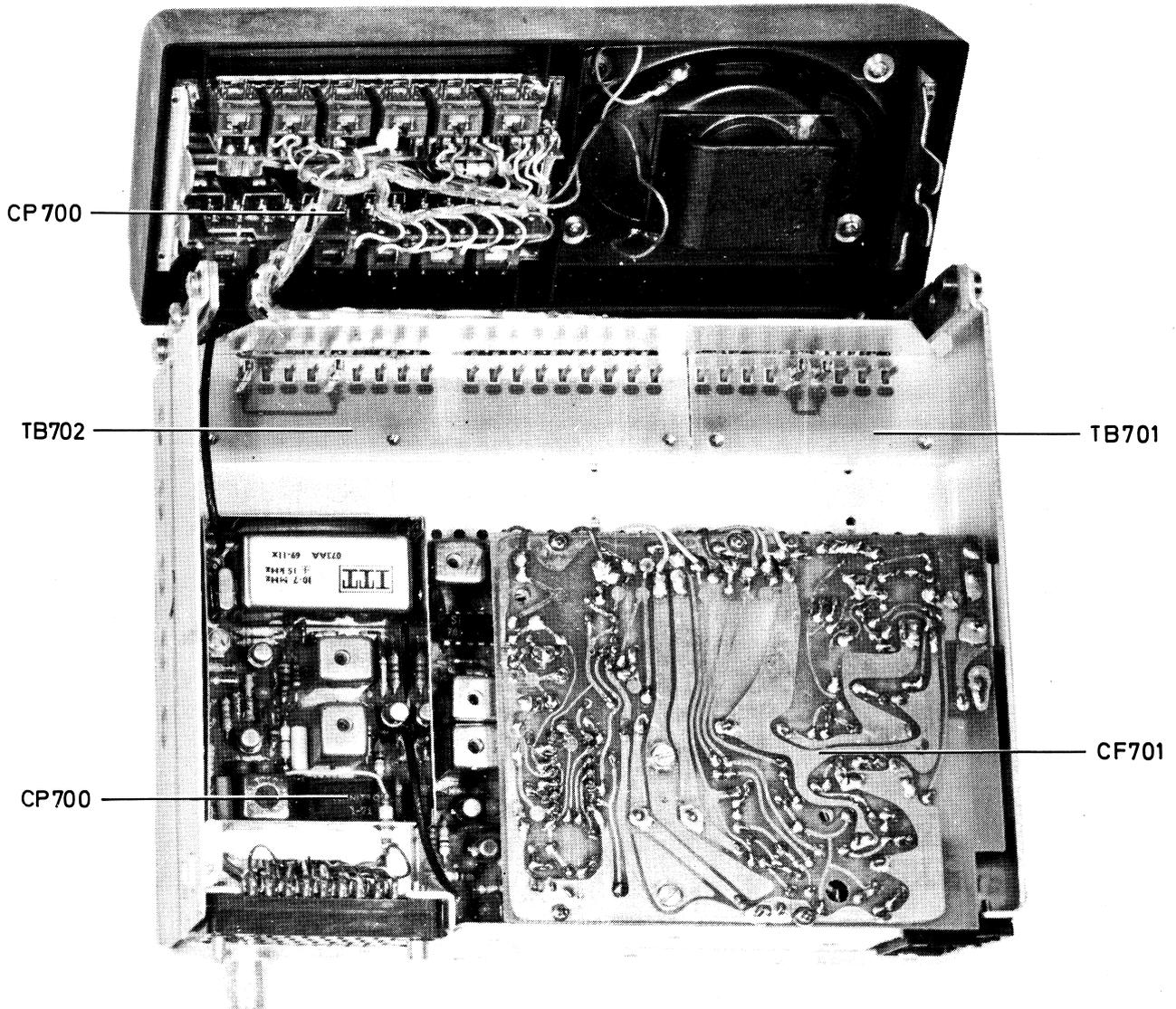
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MOBILE RADIOTELEPHONE CQM700



MOBILE RADIOTELEPHONE CQM760
TOP VIEW



MOBILE RADIOTELEPHONE CQM760

BOTTOM VIEW

GENERAL SPECIFICATIONS

Type	CQM761	CQM763
Min Channel Separation	50 kHz	25 kHz or 20 kHz
Max Frequency Swing	± 15 kHz	± 5 kHz or ± 4 kHz
Frequency Range	420 - 470 MHz	
Frequency Stability	Meets government specifications	
Max. Bandwidth	1000 kHz	
Antenna Impedance	50 ohms nominal	
Number of RF Channels	Max. 6 channels	
Ambient Temperature	Working range: -25°C to +50°C Function range: -30°C to +60°C	
Dimensions	Local controlled version: 180 x 190 x 68 mm Extended local controlled version: 180 x 160 x 68mm Control unit CB700: 118 x 65 x 55mm	
Weight	Local controlled version: 2.1 kilos Extended local controlled version: 1.9 kilos Control unit CB700: 0.2 kilos	

TRANSMITTER SPECIFICATIONS

RF Power Output	6 watts
Type of Modulation	Phase
AF Response	6dB/octave pre-emphasis 300...3000Hz +1/-3dB
Modulation Distortion	3%
Modulation Sensitivity	220 mV EMF (600 Ω)
Adjacent-channel Interference	Attenuated to meet government specifications
FM Hum and Noise	45 dB
Spurious and Harmonic Radiation	Attenuated to meet government specifications

RECEIVER SPECIFICATIONS

Sensitivity	CQM761: 1.0μV e.m.f. for 12 dB SINAD CQM763: 0.8μV e.m.f. for 12 dB SINAD
Squelch	Electronic, adjustable
Adjacent-channel Selectivity	CQM761: 85 dB (EIA measuring method) CQM763: 80 dB (FTZ measuring method)
Intermodulation	75 dB EIA, 70 dB FTZ
Spurious Radiation	Attenuated to meet government specifications
Spurious Response Attenuation	90 dB
RF Output Power	2 watts EIA

GENERAL DESCRIPTION

Introduction

The mobile radiotelephone CQM760 is a transmitter/receiver combination for simplex operated FM radio communication in the frequency range 420-470 MHz. Within this frequency range the radiotelephone is available in two versions:

CQM761 Having a minimum channel separation of ± 50 kHz.

CQM762 Having a minimum channel separation of either ± 20 kHz or ± 25 kHz.

The radiotelephone can be equipped with a maximum of 6 RF channels and it is intended for as well local operation as extended local operation.

CQM760 is operated from a 12-volt DC power supply, and when installed in a vehicle the negative potential of the battery, from which the radiotelephone is powered, must always be connected to chassis.

Construction

The radiotelephone is housed in a drawer-type cabinet consisting of an outer section designed as a housing, and an inner section that is similar to a drawer. The two sections are held together by a number of screws. The outer section is a box made of 2-mm aluminium sheet.

The drawer section consists of two trays made of cadmium-plated steel sheet. The upper tray designated RF761 contains all the circuits which are not common to the various frequency bands covered by the CQM700 programme. These are:

Antenna filters

Receiver UHF circuits

Crystal shift unit (if any)

Exciter

Transmitter power output amplifier.

The lower tray designated BA701 contains the units that are common to all the frequency bands covered by the CQM700-programme. These are:

Audio amplifier

Intermediate frequency amplifier

Squelch circuit

Voltage regulators

Tone equipment (if any).

Operation of a local controlled station is performed from the front panel of the radio cabinet.

Extended local control is performed from a control unit CB7000 which connects to the radiotelephone through a multiconductor cable provided with crimp-pins for solderless connection to the multi-way connector located on the rear of the radio cabinet.

Space is provided in the radio cabinet for installation of tone equipment and a line of tone calling units makes it possible to choose between various forms of selective tone calling systems. All types of the units are provided with cabling terminating in sockets for connection to associated plugs in the radio cabinet thereby making soldering unnecessary.

Depending on whether the radiotelephone is intended for local or extended local control and on the number of RF channels required CQM760 may be provided with the following types of front panels:

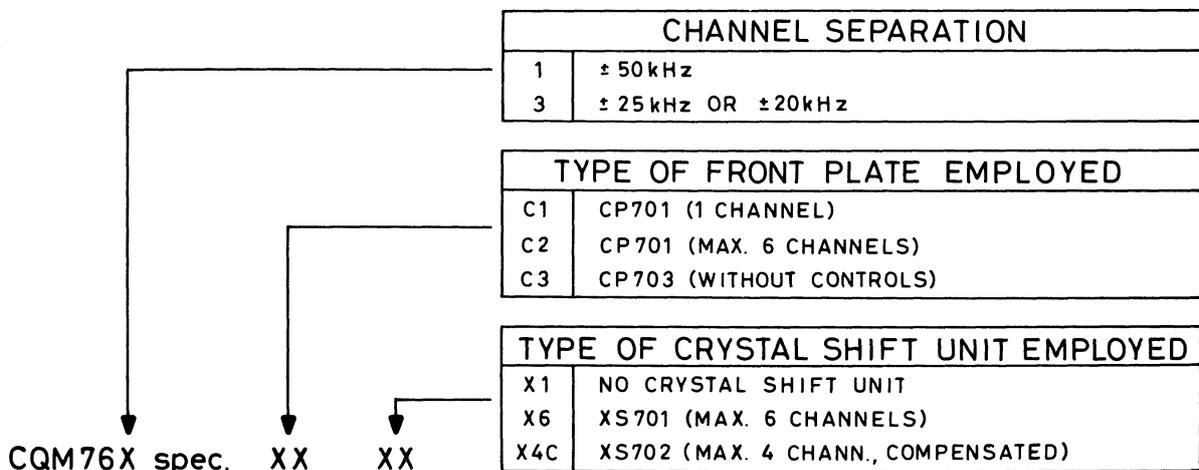
- CP701 Front panel with controls and built-in loudspeaker. This type of panel has no channel selector thus allowing the radiotelephone to be equipped with only one channel.
- CP702 Front panel with controls including channel selector for switching between a maximum of 6 channels. The panel has built-in loudspeaker.
- CP703 Front panel without controls or loudspeaker. Used in extended local controlled radiotelephones.

The radiotelephone may be equipped with one of the below types of crystal shift units if more than one RF channel is required.

- XS701 Channel shift unit for a maximum of 6 channels.
- XS702 Channel shift unit for a maximum of 4 channels with temperature compensated oscillators.

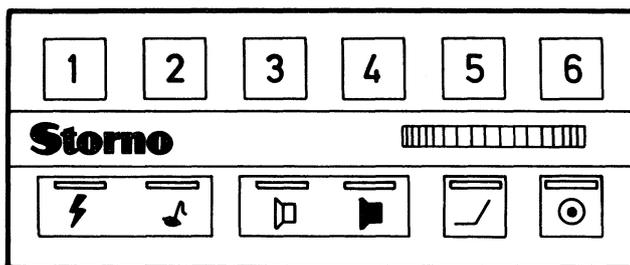
A type plate located on the radio cabinet states the type designation of the radiotelephone besides the operation and the maximum number of channels for which it is intended.

Reading of the type plate:



Operation

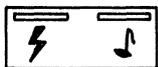
The controls located on the front panel are as follows:



CP 702 FRONT PANEL



Push-buttons for channel selection.



Tone button with lamp indicating if the channel is occupied (in radiotelephone with built-in tone transmitter).

Transmit button with transmit pilot lamp (in radiotelephone without built-in tone transmitter).



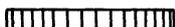
Button for cutting the loudspeaker in and out, provided with pilot lamp indicating received tone call. (This button is used in conjunction with built-in tone receiver only).



Squelch button for cutting the squelch function in and out.



On/off switch with start lamp.



Volume control.

Notice: In radiotelephones with built-in tone transmitter an external key (e. g. steering column switch or microphone button) must be used as transmit button as the internal button on the front panel is then used for keying the tone transmitter.

The CP701 front panel corresponds to type CP702 with the exception of the channel switching unit which is replaced by a dummy chassis.

Control Equipment and Accessories

The list below covers the types of control equipment and accessories that are available for the CQM760 radiotelephone. Some of them, such as installation materials, antenna, and microphone, are necessary for installing and operating the equipment.

Microphones

- MC701 Fixed microphone with built-in amplifier. Hardware for fixed mounting is supplied.
- MC702 Fist microphone with built-in amplifier, transmit button, and retainer. Mounting hardware is applied.
- MC703 Fixed microphone for mounting on steering column.
- MT701 Handset with built-in amplifier and transmit button. Retainer and mounting hardware is supplied.

All the above types of microphones and handset are provided with cables terminating in crimp-pins for solderless mounting in a multiway connector which provides for connection of accessories to the radiostation.

Antennas

The radiotelephone is designed for operation with a 50-ohm antenna. Storno can supply the following types which have bases designed to permit mounting from the outside without damaging the car upholstery.

- AN69-3 1/4 wavelength whip antenna for the frequency range 420-470 MHz.
- AN69-4 5/8 wavelength whip antenna for the frequency range 420-470 MHz.

Control Units

One of the following control units, which are intended for installation in or below the dashboard, can be employed for extended local control of the radiotelephone:

- CB701 Control unit housed in a cast plastic cabinet containing controls for the operation of the radiotelephone. This control unit has no channel selector.
- CB702 Control unit housed in a cast plastic cabinet containing controls for the operation of the radiotelephone including a channel selector for switching between a maximum of 6 RF channels.

Both types of control units are provided with a multiconductor cable terminating in crimp-pins for solderless mounting in a multiway connector which provides for connection of the control unit and other accessories to the radio station.

Loudspeakers

When using CQM760 as an extended local controlled station it is necessary to connect an external loudspeaker. The following types are available:

- LS701 Loudspeaker contained in a plastic housing provided with cable terminating in crimp-pins for solderless mounting in a multiway connector which provides connection of accessories to the radiostation.
- LS702 Weatherproof loudspeaker featuring the same facilities as type LS601.

Steering-Column Switches

Steering-Column Switches which are used as external transmitter keys are available in two versions, types SU601 and SU602.

Installation Kits

In addition to the accessories listed above, the installation of a CQM760 radiotelephone requires a number of installation kits. These are specified below:

- MN701 Mounting frame for radio cabinet, complete with fixing screws.
- CC701 Cable kit containing battery cable and antenna cable required for installation of a radiotelephone.
- MK701 Mounting kit containing connectors for connection of battery, antenna, and accessories to the radiostation besides fusebox and fuses for installation in the battery cable.

In conjunction with extended local control of the radiotelephone the distance between the control unit and the radiostation may be extended further by means of the below kit:

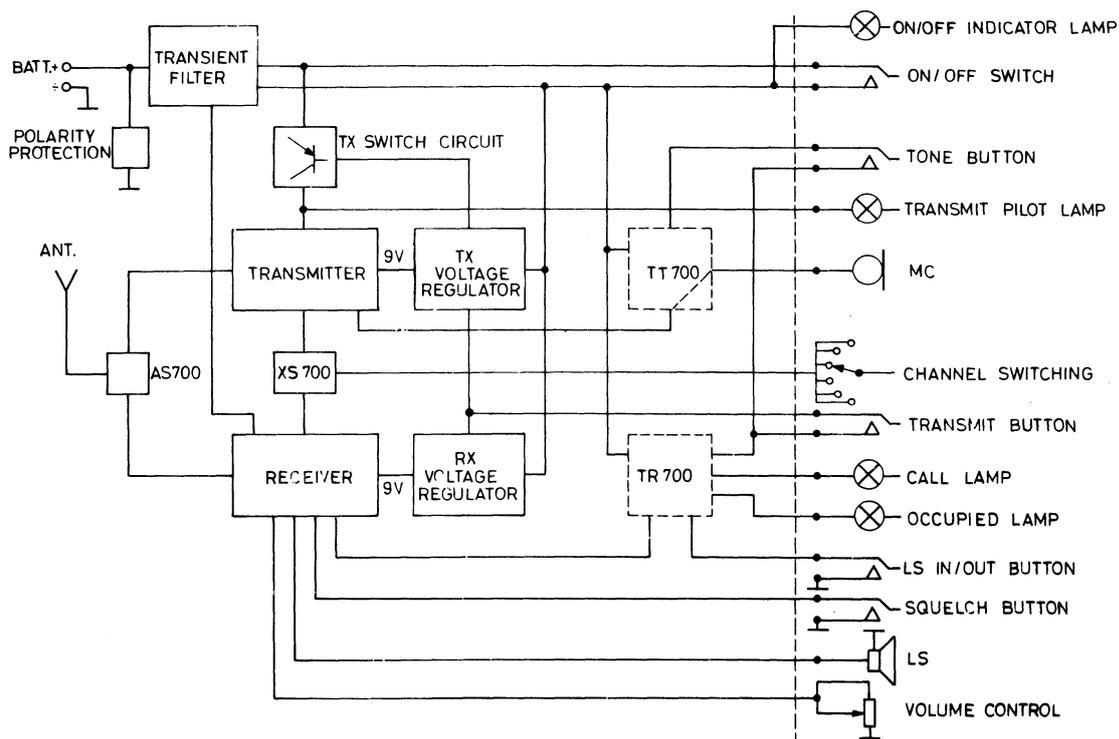
- CC703 Extension cable kit with connectors.

For radiotelephones with built-in tone receiver the following accessories for connection of external alarm devices are available:

- AC701 Alarm circuit.
- SU703 Auto relay.

CIRCUIT ANALYSIS

Principle of Operation



The 13.6 volts supply voltage from the battery is applied to the battery connector designated "BATT.". A zener diode connected in the back direction across the battery input serves the purpose of protecting the radiotelephone against the consequences of incorrect battery-voltage polarity. This polarity protection diode is followed by a transient filter from the output of which the supply voltage is applied partly to the on/off switch, and partly to the output stage of the transmitter through a switch transistor.

When activating the on/off switch voltage is fed to two 9-volt voltage regulator circuits for the transmitter and receiver section respectively. Furthermore supply voltage is delivered to the audio output amplifier of the receiver and built-in tone equipment, if any.

The antenna signal is passed to the antenna switching circuit and further to the input of the receiver. The antenna switching operation is controlled by the stabilized 9-volt voltages from the transmitter and receiver voltage regulators.

The local oscillator signal to the receiver is delivered from the channel shift unit XS700 which is controlled from the channel selector. However, in the version of CQM700 intended for one channel only, the radiotelephone contains no channel shift unit as the single pair of crystal oscillators required for that purpose will be incorporated in the transmitter and receiver sections.

The audio output from the receiver is applied to the loudspeaker (LS). The output level is adjusted by means of the volume control.

The squelch function of the receiver may be cut out by means of a squelch button.

As may be seen from the simplified functional diagram the receiver may be connected to a tone receiver TR700, which is used in selective tone calling systems. The tone receiver serves the purpose of cutting the AF circuitry of the receiver in and out.

In systems using selective call the loudspeaker output will normally be cut out by means of the "Loudspeaker In/Out" button.

On receiving a tone call for which the tone receiver is set this will automatically cut in the loudspeaker. A "call lamp" and a "occupied lamp" indicating that a call to the radio station has been received and that the frequency channel is occupied are also controlled by the tone receiver.

These lamps are not used in radiotelephones without tone receiver.

The oscillator signal to the exciter of the transmitter is delivered by the channel shift unit, and the modulating signal to the transmitter modulator is applied from the microphone (MC) through the tone transmitter TT700, if any.

During transmission of tone calls the microphone will be cut out automatically so that the transmitter is modulated only by the tone signal from TT700.

The transmitter is keyed by depressing the transmit button. This will block the receiver's voltage regulator and cancel the blocking of the transmitter's voltage regulator. When the transmitter's voltage regulator starts operating supply voltage is delivered to the exciter and the switch circuit. The switch circuit, in its turn, passes current to the output power amplifier and the entire transmitter is functioning.

The "transmitter on" condition is indicated by a transmit pilot lamp.

In radiotelephones with built-in tone receivers the transmitter cannot be operated until the loudspeaker has been cut in manually by means of the "loudspeaker in/out" button.

Receiver Section

The CQM760 receiver section is a double-conversion superheterodyne using intermediate frequencies of 10.7 MHz and 455 kHz. The very high input selectivity characterizing the receiver is obtained by means of a five-element helix filter having a low insertion loss.

The necessary channel selectivity is accomplished by means of two block filters, viz. a 10.7 MHz crystal filter, and a 455 kHz ceramic filter.

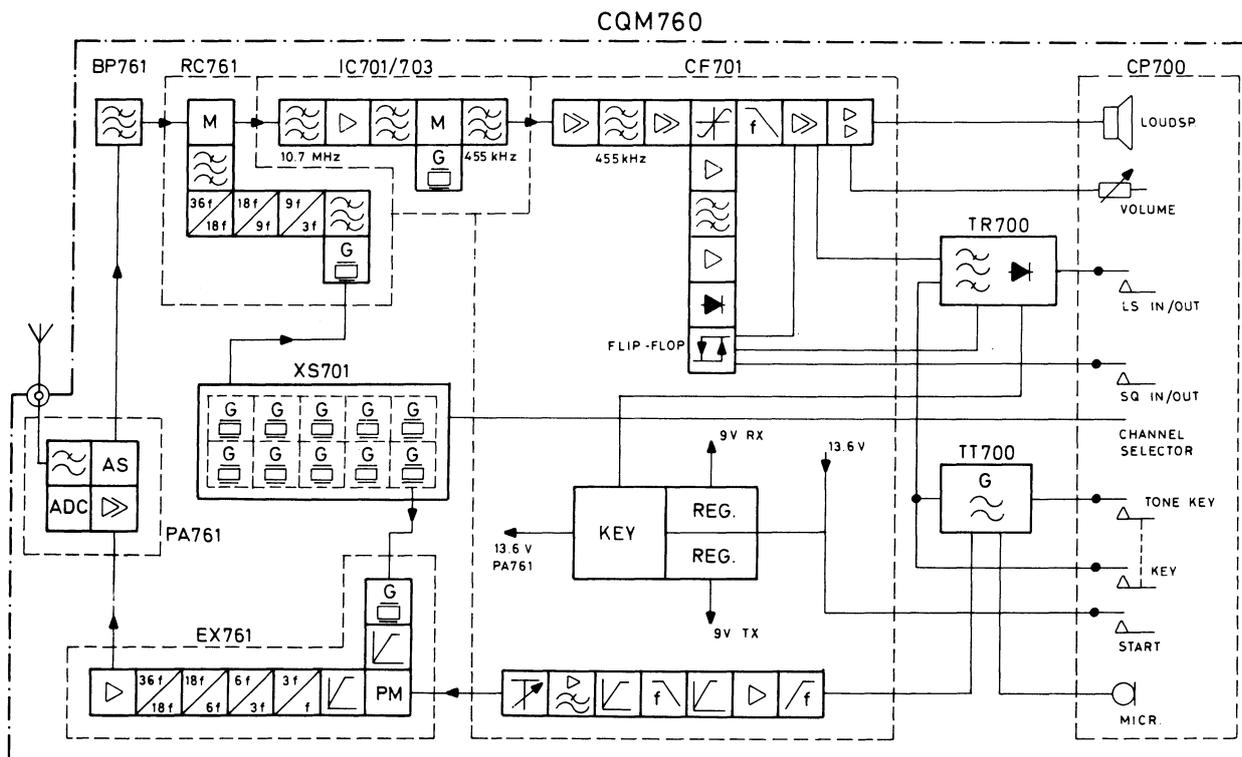
A maximum of 6 crystal controlled oscillators - one for each frequency channel - can be provided.

The oscillators are connected in parallel and channel switching is performed by switching the DC chassis connection between the oscillators.

The receiver is composed of the following subunits:

Antenna switching unit	AS761
Helix filter (RF input filter)	BP761
Receiver converter with multiplier and 1st mixer	RC761
Intermediate-frequency converter with 10.7 MHz crystal filter, 2nd mixer, and 455 kHz ceramic filter:	
For 50 kHz channel separation	IC701 or
For 25 kHz and 20 kHz channel separation	IC703
455 kHz intermediate-frequency amplifier, squelch, audio amplifier, and voltage regulator. (These circuits constitute part of subunit CF701)	CF701
Channel switching unit:	
For maximum 6 channels	XS701 or
For maximum 4 channels, temp. compensated	XS702

Signal Path



The input circuits of the receiver are designed to meet the requirements for good selectivity and intermodulation characteristics.

From the antenna shift unit the input signal is passed through a helix filter and an impedance matching network directly to the mixer stage. Because of a low insertion loss in the helix filter it is possible to obtain a good receiver sensitivity without using an RF amplifier stage. The omission of an RF amplifier offers the advantages of improved blocking, selectivity, and intermodulation characteristics.

The BP761 helix filter consists of five tuned circuits which can be adjusted to cover the entire UHF band 420-470 MHz. The coupling between the helix filter and the mixer stage is performed by a tuned impedance matching network loaded with a low Q. This network transforms the output impedance of the helix filter into the input impedance required for the field-effect transistor in the mixer stage.

Both the injection signal and the antenna signal are applied to the gate of the transistor. The mixer works into a drain circuit from which the 10.7 MHz signal is taken off.

Injection signal to 1st mixer

The injection signal is produced in an oscillator working on the fundamental frequency of the crystal. The oscillator operates within the frequency range 11.35 MHz to 12.75 MHz.

In the oscillator the 3rd harmonic frequency is selected and applied to a multiplier chain consisting of a tripler and two doubler stages. The multiplier output frequency is 36 times the fundamental frequency of the oscillator.

After the last doubler stage follows a filter consisting of three tuned circuits capacitively coupled to each other. The purpose of the filter is to attenuate undesired frequencies generated by the multiplier chain thereby preventing them from reaching the mixer stage.

The injection signal is chosen to be 10.7 MHz below the antenna frequency, and it is calculated as follows:

$$f_x = \frac{f_a - 10.7}{36} \text{ MHz}$$

where f_x is the crystal frequency
and f_a is the antenna frequency.

The RC761 receiver converter includes an oscillator intended for use in receivers with only one channel. In case more than one channel is required the radiotelephone will be provided with a channel switching unit type XS701 or XS702.

XS701 contains oscillators for five RF channels thus allowing the receiver to be equipped with a maximum of 6 channels.

The oscillator switching unit type XS702 is a temperature compensated unit employed where radiotelephones are to work under extreme low temperatures. The compensation consists in heating the crystals when the ambient temperature falls below approx. -5°C .

XS702 contains oscillators for a maximum of 4 channels.

Intermediate-frequency circuitry

From the mixer in RC761 the 10.7 MHz signal is passed to the intermediate-frequency converter type IC701 or IC703 - depending on the channel separation used - which provides for the entire channel selection in the receiver.

First the 10.7 MHz IF signal is filtered in a crystal filter and afterwards amplified in an IF amplifier stage before it is applied to the transistor in the 2nd mixer stage where it is converted to 455 kHz.

The injection signal to the mixer stage is produced by a crystal-controlled oscillator the frequency of which is normally chosen to be 10.7 MHz less 455 kHz, that is 10.245 MHz, but in cases where one of the harmonics of the local oscillator coincides with the frequency of the antenna signal, which might cause interference, a crystal frequency of 10.7 MHz plus 455 kHz, that is 11.155 MHz, is chosen instead.

In the first case the crystal frequency is calculated as follows:

$$f_x + 0.455 = 10.7 \text{ MHz}$$
$$f_x = 10.7 \text{ MHz} - 0.455 \text{ MHz.}$$

In the second case (crystal frequency chosen to be 11.155 MHz) the crystal frequency is calculated as:

$$f_x - 0.455 = 10.7 \text{ MHz}$$
$$f_x = 10.7 \text{ MHz} + 0.455 \text{ MHz.}$$

Within the frequency range 420 - 470 MHz the oscillator frequency will have to be calculated according to the last mentioned formula when the below frequencies are used:

420.0 - 421.5 MHz
428.9 - 431.7 MHz
439.1 - 441.9 MHz
449.4 - 452.2 MHz
459.6 - 462.4 MHz
469.8 - 474.7 MHz

The 455 kHz intermediate-frequency signal from the mixer stage is passed through a ceramic filter in the IC701 or IC703 converter unit before it is applied to the intermediate-frequency amplifier in CF701.

The 455 kHz intermediate-frequency amplifier consists of two resistance-coupled amplifier stage followed by a double-tuned filter and a three-stage integrated amplifier. The last two stages will normally be operating as limiters.

The amplified and limited signal is next detected in a phase detector which constitutes a part of the integrated package containing the last three stages of the IF amplifier.

The detector is a so-called "Quadrature detector" or "product detector" of the balanced type which provides an effective suppression of AM signals. As the detector has only one tuned circuit it is very simple to adjust.

AF circuitry

The detected signal from the discriminator is fed through a de-emphasis network to a potentiometer which is used for setting the AF signal level irrespective of the channel separation and thus the frequency deviation used.

The signal is then applied to a three-stage amplifier in which a field-effect transistor operating as an electronic switch has been inserted between the second and third stage. This switch serves the purpose of cutting the AF signal in and out in conjunction with the squelch circuit. The three-stage amplifier has a nominal output level of -17 dBm (600 Ω).

The signal is passed on to the loudspeaker amplifier and the tone receiver, if any.

The loudspeaker amplifier amplifies the AF input of 110 mV (600 Ω) to an output level of 2 watts (5 Ω). The input stage is coupled to an active filter which cuts off all frequencies below 250 Hz.

An adjustable resistor forming part of the collector resistance renders it possible to make a 12 dB adjustment of the amplification.

The final regulation of the amplification and thus the loudspeaker output level is performed by means of the volume control on the control panel of the radio-telephone. Electrically the volume control is connected between the first and second AF amplifier stage.

The AF output stage consists of two complementary power transistors operating in Class B push-pull.

Besides temperature compensation negative feed back is employed in the output amplifier to improve the stabilization.

By applying a positive voltage to a "muting terminal" on the AF amplifier it is possible to mute the AF output to the loudspeaker. This muting takes place during periods of transmission and in conjunction with built-in tone receiver where the loudspeaker can be cut out manually.

Squelch Circuit

The squelch circuit in CQM700 is operated by noise voltages in the output signal of the discriminator.

The AF signal from the discriminator is passed to a selective amplifier stage with a resonant circuit in the collector. The resonance frequency of this circuit can be changed in accordance with the channel separation used by means of a strapping arrangement.

The noise signal is passed through an expander circuit before it is detected and applied to a Schmitt trigger, which controls the before mentioned electronic switch in the AF circuit.

When the noise level exceeds a certain value, i. e. when the signal-to-noise ratio falls below a certain value, the trigger circuit will be activated and the AF signal cut off.

The Schmitt trigger also controls a squelch signal circuit which - via the tone receiver, if any - operates the "occupied lamp".

The squelch sensitivity is adjusted by a potentiometer located in the input of the expander circuit (amplitude selective noise amplifier).

By means of a squelch button on the control panel of the radiotelephone the Schmitt trigger can be blocked manually thus cutting off the squelch circuit.

Transmitter Section

(See block diagram on page 9).

The transmitter is phase modulated. Its output frequency is 36 times the oscillator frequency. Phase modulation is performed at the fundamental frequency.

The transmitter is composed of the following subunits:

Channel switching unit (in radiotelephones intended for more than one channel):

For maximum 6 channels XS701

For maximum 4 channels, (temp. compensated) XS702

Exciter with modulator EX761

RF power amplifier PA761

Antenna shift unit AS761

Modulation amplifier, switch circuits, and voltage regulator CF701

(These circuits constitute part of CF701).

AF Circuitry

The modulating signal from the microphone is fed through the tone transmitter unit, if any, otherwise directly to the modulation amplifier in CF701 where it is differentiated (pre-emphased), amplified, limited, integrated, and filtered. The modulation amplifier circuit serves the purpose of matching the microphone output to a signal suitable for the modulator, and to limit the amplitude of the said signal so that the maximum permissible frequency swing will not be exceeded, and the transmitter will not cause interference on adjacent channels.

The amplifier consists of an integrated dual operational amplifier. The differentiation is performed by an RC network in the input of the 1st pre-amplifier. A high degree of negative feedback secures a constant amplification in this amplifier stage. Furthermore the 1st pre-amplifier operates as an amplitude limiter which prevents the signal from exceeding a certain level. From the 1st amplifier the signal is passed through an RC network before it is applied to another limiter consisting of two dual diodes.

This extra limiter has been inserted in order to prevent the phase modulator from being overdriven at low modulating frequencies (phase clipping). During nominal frequency swing the extra clipper will be inactive.

Before being applied to the phase modulator the modulating signal is filtered in a splatter filter. The filter is designed as an active filter containing the 2nd amplifier in the integrated dual amplifier unit.

A potentiometer located in the output of the modulation amplifier circuit is used for adjusting the maximum frequency swing.

RF Circuitry

The fundamental RF signal is generated in a crystal controlled oscillator. As in the case with the receiver, channel switching is performed by switching the DC chassis connection between the oscillators. The transmitter uses one oscillator for each channel. The exciter EX761 contains an oscillator for channel 1. If more than one channel is required the transmitter will be provided with a channel switching unit.

The exciter performs two main functions: it modulates the RF oscillator signal and converts it to a frequency and a level suitable for the following power amplifier, PA761.

The RF signal from the oscillator is applied to the 1st buffer, next to the phase modulator which, in its turn, is followed by the 2nd buffer. The buffers provide for a constant input level to the modulator and correct load impedances.

The phase modulator is a so-called "transconductance modulator" as the phase modulation is produced by varying the transconductance of a transistor. The

modulating signal is applied to the emitter of the transistor whereby its operating point and thus the transconductance is changed concurrently with the modulating signal.

From the 2nd buffer the signal is fed to a frequency multiplier chain consisting of 1st tripler, 1st doubler, 2nd tripler, and 2nd doubler. The transmitter output frequency is 36 times the crystal oscillator frequency.

The first three multipliers are designed as balanced circuits resulting in suppression of certain harmonic frequencies.

The triplers suppress the even harmonics and the doublers suppress the odd harmonics.

Double-tuned bandpass filters with close-to-critical coupling between circuits are used as coupling elements between the stages. These filters limit the bandwidth of the exciter by attenuating undesired harmonics generated in the frequency multiplication process.

From the 2nd doubler the transmitter output frequency signal is fed to an amplifier stage with double-tuned bandpass filters in its input and output circuits which contributes to improved selectivity and thus attenuation of undesired frequencies. Another purpose of the amplifier stage is to amplify the exciter signal to a level suitable for the RF power amplifier unit, PA761. The nominal signal output level of EX761 is 80 mW into a 50 ohms load.

The bandwidth of the transmitter and thus the maximum frequency separation between the channels is determined by the selectivity in the exciter.

The output signal from the exciter is fed to the RF power amplifier which raises the RF signal level to the desired antenna output power.

The power amplifier contains four transistorized amplifier stages all operating on the same frequency. The coupling between the stages consists of tuned matching network loaded with a low Q.

The RF power amplifier is a Class C amplifier resulting in a high efficiency. An ADC Circuit (Automatic Drive Control Circuit) in the power amplifier unit regulates the supply voltage to the first PA stage and consequently the drive to the following power amplifier stages. The purpose of this circuit is to ensure constant current through the output transistors and so prevent them from being overloaded. The ADC circuit also causes the output of the RF power amplifier to be less dependent on variations in supply voltage and ambient temperature. By means of a potentiometer in the ADC circuit it is possible to reduce the transmitter output.

From the RF power amplifier the signal is passed through an electronic antenna shift unit and a lowpass filter to the antenna.

The antenna shift unit is composed of diodes which are forward biased during transmission and reverse biased during reception. The lowpass filter is a 7-pole Chebyshev filter having a low insertion loss and low ripple. It serves the purpose

of preventing the transmitter from radiating signals at undesired frequencies, such as harmonics of the signal frequency.

The lowpass filter is not adjustable.

Power Supply Circuits and Switch Circuits

CQM700 is powered directly from a 12-volt car battery. The negative battery voltage terminal on the radiotelephone connects directly to the radio chassis, i. e. the radio cabinet.

To suppress noise and transients from the battery voltage the CQM700 is provided with a transient filter.

A polarity protection zenerdiode connected across the battery input serves the dual purpose of limiting peak voltages to approx. 20 volts and protect the radiotelephone against the consequences of incorrect battery-voltage polarity. Incorrect polarity will cause the diode to become conductive, thus blowing the battery-cable fuse.

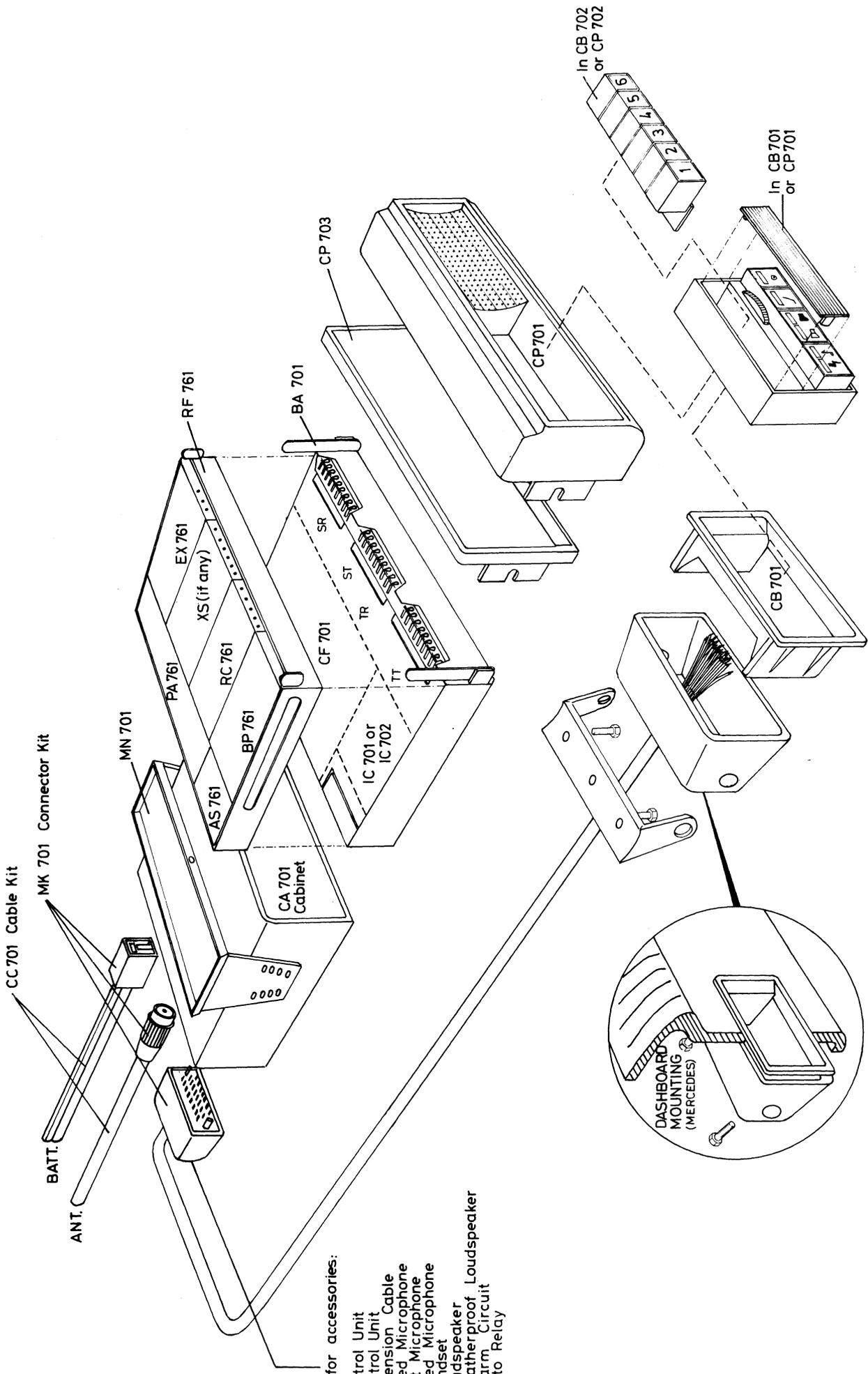
The CQM700 contains two identical voltage regulator circuits, one for the transmitter and one for the receiver, which deliver 9-volt stabilized supply voltages for operating the transmitter and receiver sections of the radiotelephone with the exception of the loudspeaker AF amplifier and the transmitter RF power amplifier which receive their supply voltages from the battery voltage input.

The voltage regulators are protected against short-circuit by limiting their short-circuit currents so that they will not exceed the maximum currents that can be drawn from the regulators.

Each regulator has a built-in blocking transistor which is controlled from the transmit key button. When the key button is in its non-operated condition the transmitter voltage regulator will be blocked whereas the receiver voltage regulator will be operating, and vice versa when the transmitter is keyed. The supply voltage for the PA761 power amplifier in the transmitter is taken directly from the transient filter and applied to the amplifier unit through a switch transistor. This switch transistor is controlled by the transmitter voltage regulator which, in its turn, is controlled from the transmitter key button.

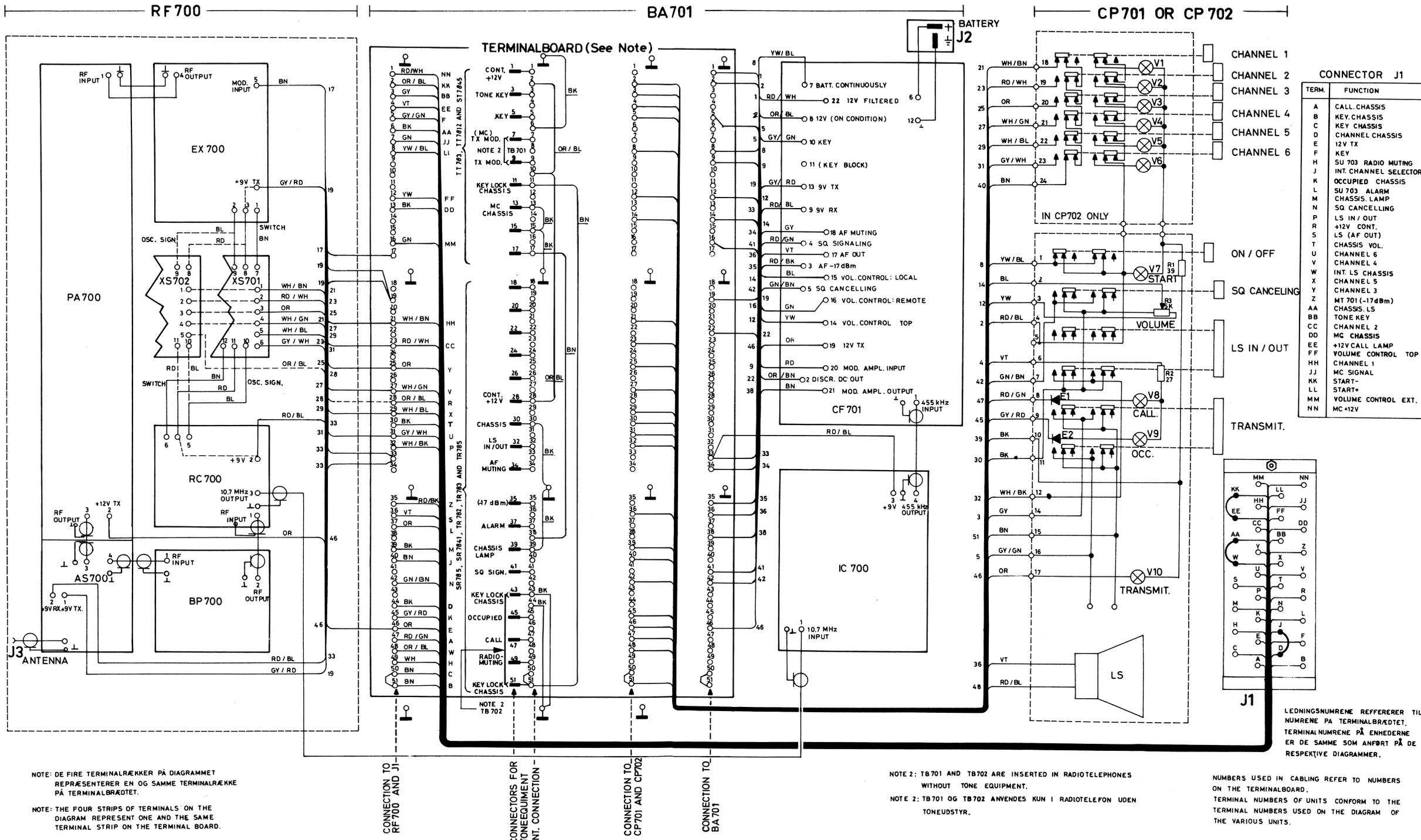
NOTE: The voltage applied to the switch transistor cannot be turned off by means of the on/off switch on the radiotelephone.

CIRCUIT DIAGRAMS AND PARTS LISTS



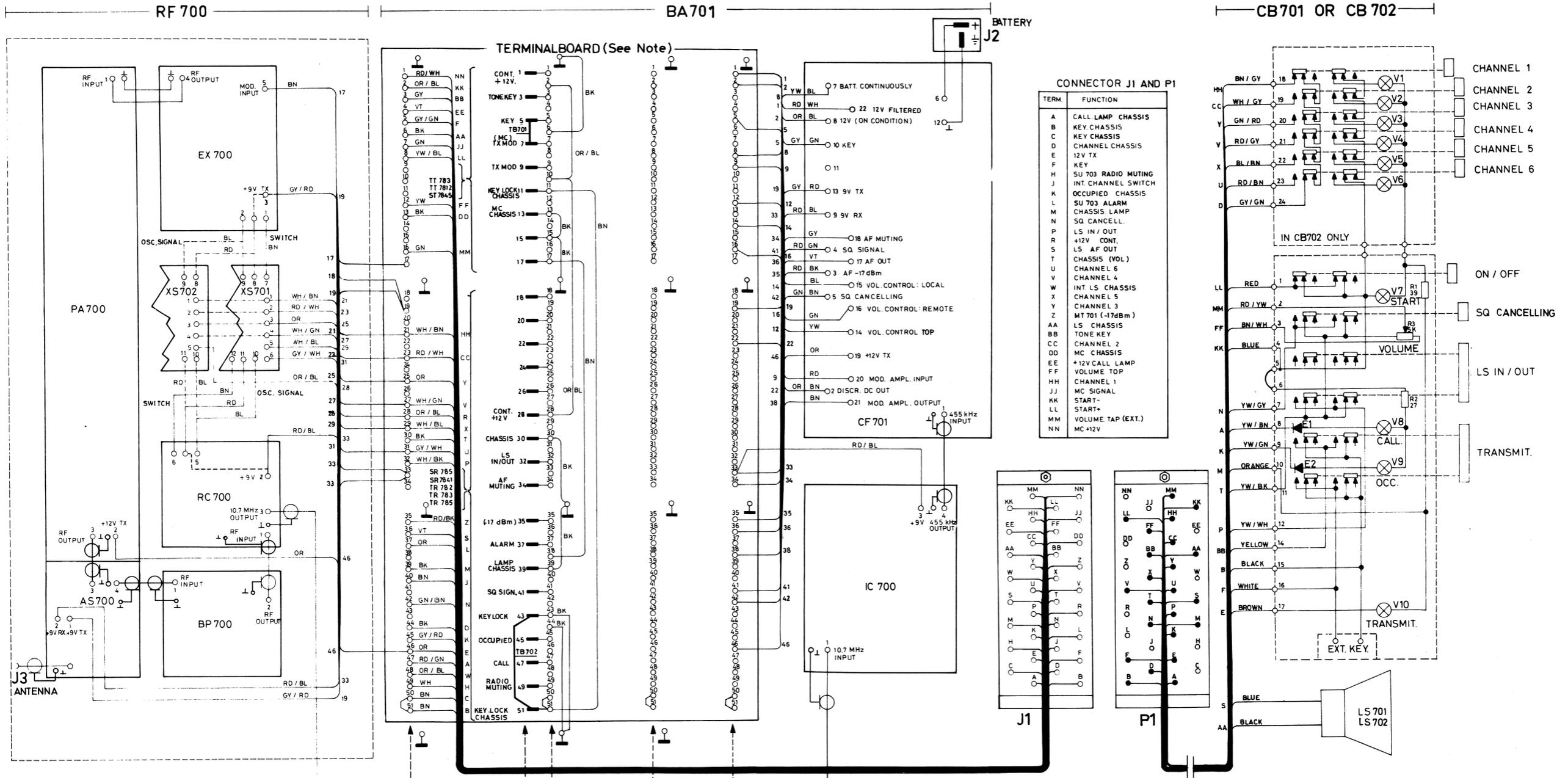
Connector for accessories:

- CB 701 Control Unit
- CB 702 Control Unit
- CC 703 Extension Cable
- MC 701 Fixed Microphone
- MC 702 Fixed Microphone
- MC 703 Fixed Microphone
- MT 701 Handset
- LS 701 Loudspeaker
- LS 702 Weatherproof Loudspeaker
- AC 701 Alarm Circuit
- SU 703 Auto Relay



CABLING
LOCAL CONTROLLED
LOKAL BETJENT

CQM700



CONNECTOR J1 AND P1

TERM.	FUNCTION
A	CALL LAMP CHASSIS
B	KEY CHASSIS
C	KEY CHASSIS
D	CHANNEL CHASSIS
E	12V TX
F	KEY
H	SU 703 RADIO MUTING
J	INT. CHANNEL SWITCH
K	OCCUPIED CHASSIS
L	SU 703 ALARM CHASSIS LAMP
M	SQ CANCELL.
N	LS IN / OUT
P	+12V CONT.
R	LS AF OUT
S	CHASSIS (VOL)
T	CHANNEL 6
U	CHANNEL 4
V	INT. LS CHASSIS
W	CHANNEL 5
X	CHANNEL 3
Y	MT 701 (-17dBm)
Z	LS CHASSIS
AA	LS CHASSIS
BB	LS CHASSIS
CC	CHANNEL 2
DD	MC CHASSIS
EE	+12V CALL LAMP
FF	VOLUME TOP
HH	CHANNEL 1
JJ	MC SIGNAL
KK	START+
LL	START+
MM	VOLUME TAP (EXT.)
NN	MC +12V

NOTE: DE FIRE TERMINALRÆKKER PÅ DIAGRAMMET REPRÆSENTERER EN OG SAMME TERMINALRÆKKE PÅ TERMINALBRÆDDET.

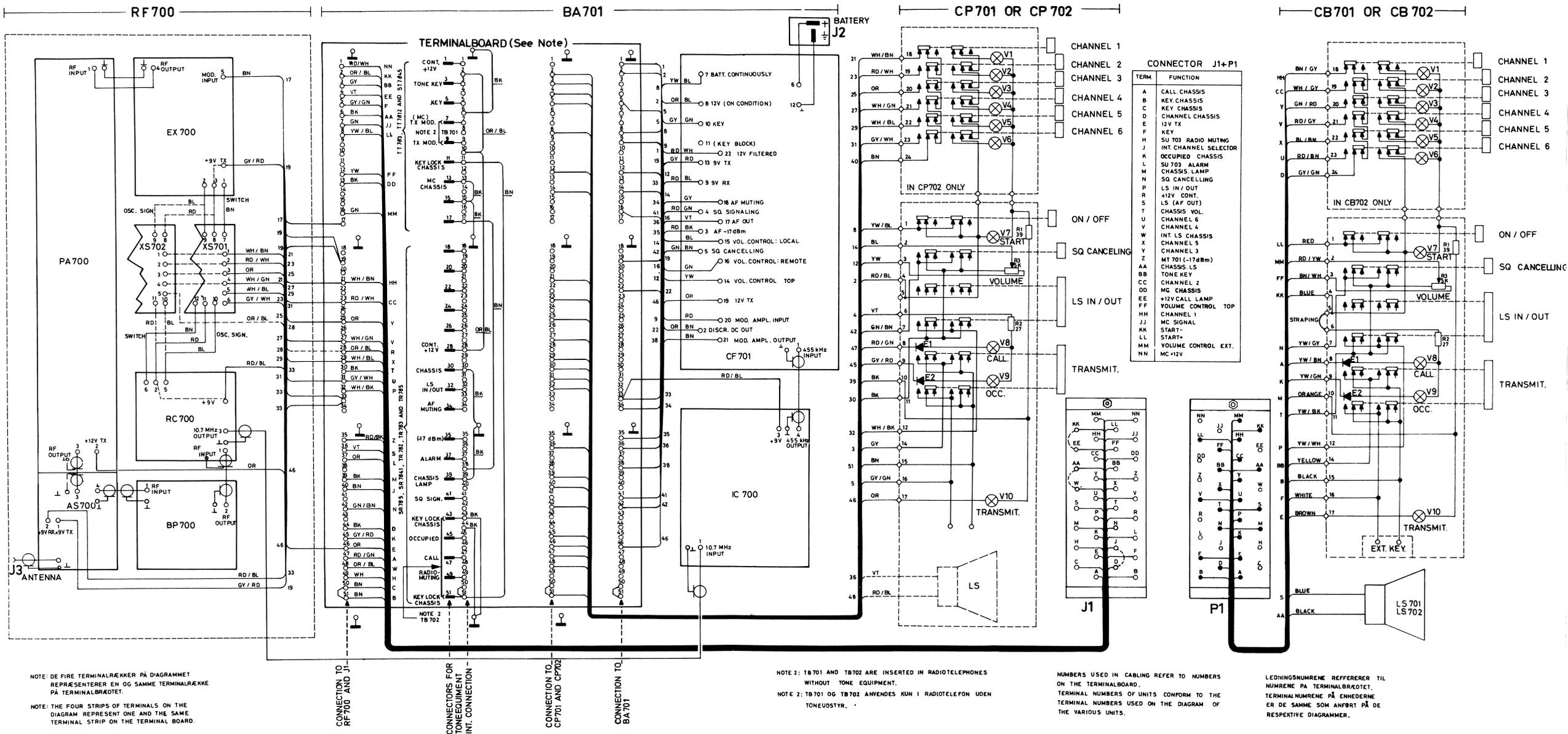
NOTE: THE FOUR STRIPS OF TERMINALS ON THE DIAGRAM REPRESENT ONE AND THE SAME TERMINAL STRIP ON THE TERMINAL BOARD

CONNECTION TO RF 700 AND J1
 CONNECTORS FOR TONEEQUIPMENT INT. CONNECTION
 CONNECTION TO CP701 AND GP702
 CONNECTION TO BA701

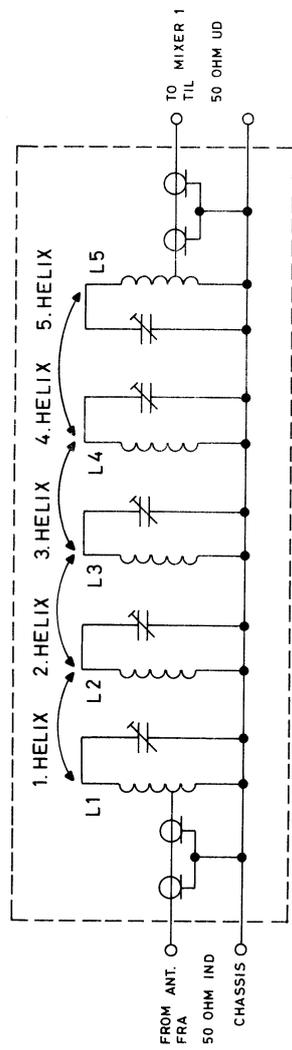
LEDNINGNUMRENE REFERERER TIL NUMRENE PÅ TERMINALBRÆDDET. TERMINAL NUMRENE PÅ ENHEDERNE ER DE SAMME SOM ANFØRT PÅ DE RESPEKTIVE DIAGRAMMER

NUMBERS USED IN CABLING REFER TO NUMBERS ON THE TERMINALBOARD. TERMINAL NUMBERS OF UNITS CONFORM TO THE TERMINAL NUMBERS USED ON THE DIAGRAMS OF THE VARIOUS UNITS.

CABLING EXTENDED LOCAL CONTROLLED CQM700 FJERNBETJENT CQM700



CABLING
LOCAL/EXTENDED LOCAL CONTROLLED CQM700
LOKAL/FJERNBETJENT CQM700



HELIX FILTER BP761

BAND PASS FILTER BP761

D401.325

Storno

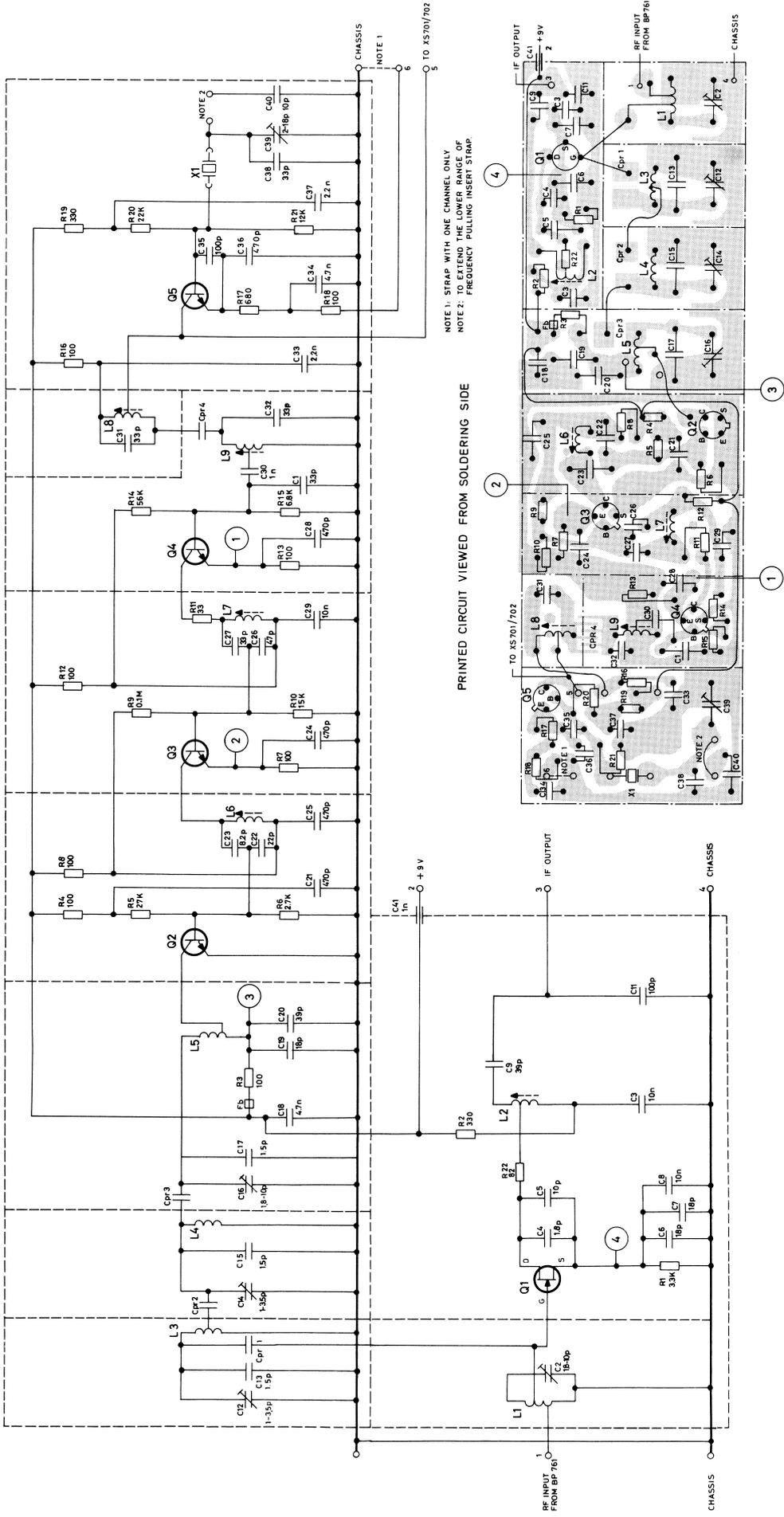
TYPE	NO.	CODE	DATA
BP761	L1 L2 L3 L4 L5	10.2426 62.0793 62.0793 62.0793 62.0793 62.0793	Helical Band Pass Filter Coil Coil Coil Coil Coil

Storno

TYPE	NO.	CODE	DATA
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BAND PASS FILTER BP761

X401.316



PRINTED CIRCUIT VIEWED FROM SOLDERING SIDE

NOTE 1: STRAP WITH ONE CHANNEL ONLY
 NOTE 2: TO EXTEND THE LOWER RANGE OF
 NOTE 2: FREQUENCY PULLING INSERT STRAP

RECEIVER CONVERTER RC761

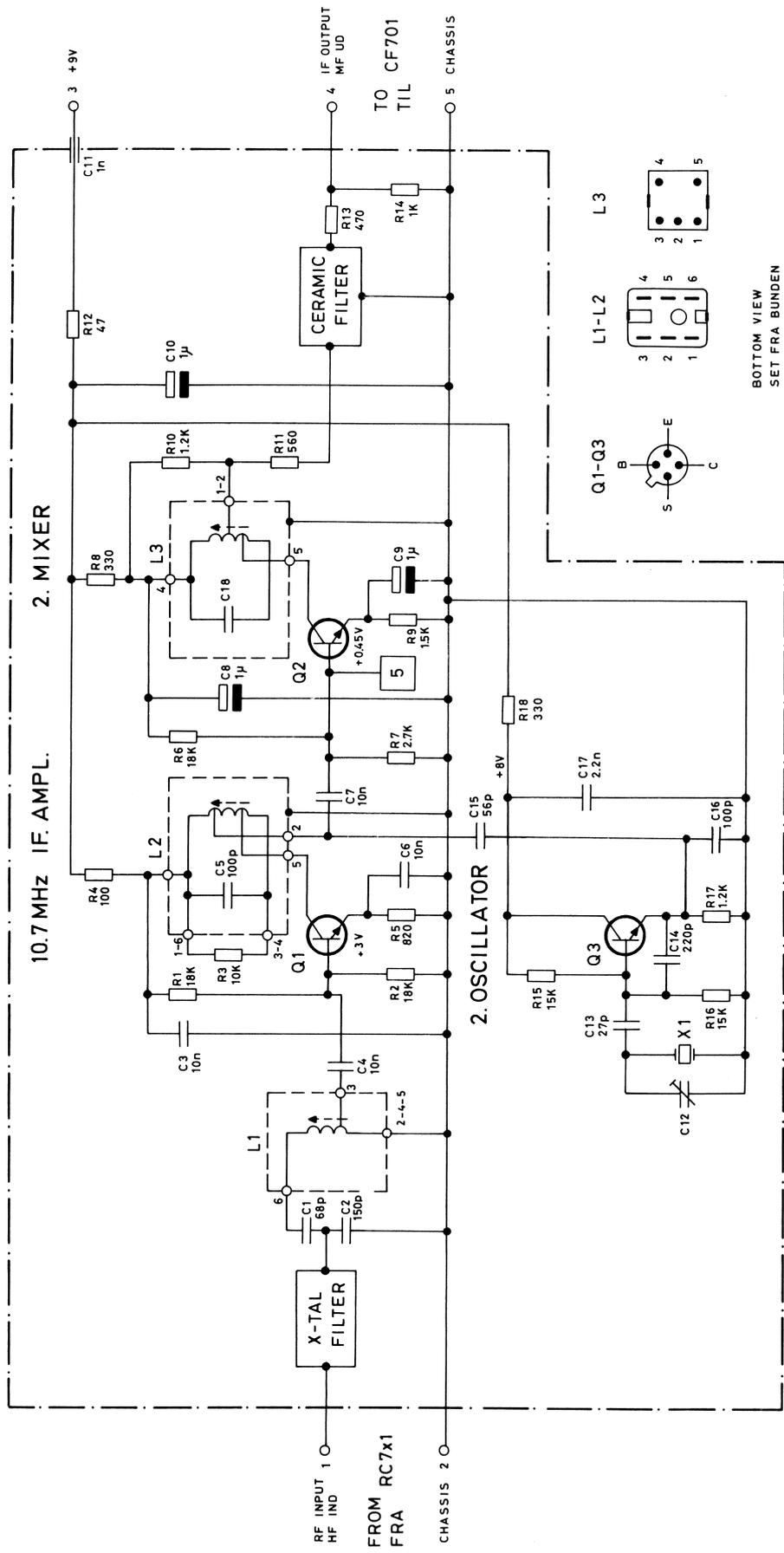
D 401.333/2

TYPE	NO.	CODE	DATA
RC761		10.2430	Receiver Converter
	C1	74.5129	3.3 pF ± 0.25 pF ceram DI
	C2	78.5048	1.8 - 10 pF trimmer
	C3	74.5109	10 nF -20 +80% ceram PL
	C4	74.5126	1.8 pF ± 0.25 pF ceram BD
	C5	74.5135	10 pF 5% ceram DI
	C6	74.5138	18 pF 5% ceram DI
	C7	74.5139	18 pF 5% ceram DI
	C8	74.5109	10 nF -20 +80% ceram PL
	C9	74.5195	39 pF 5% ceram TB
	C11	76.5102	100 pF 2.5 pF polystyr TB
	C12	78.5047	1-3.5 pF trimmer
	C13	74.5189	1.5 pF ± 0.25 pF ceram BD
	C14	78.5047	1-3.5 pF trimmer
	C15	74.5189	1.5 pF ± 0.25 pF ceram BD
	C16	78.5048	1.8-10 pF trimmer
	C17	74.5189	1.5 pF ± 0.25 pF ceram BD
	C18	76.5061	4.7 nF 10% polyester, FL
	C19	74.5138	18 pF 5% ceram DI
	C20	74.5117	39 pF 5% ceram TB
	C21	74.5161	470 pF -20 +80% ceram PL
	C22	74.5106	22 pF 5% ceram TB
	C23	74.5134	8.2 pF ± 0.25 pF ceram DI
	C24	74.5161	470 pF -20 +80% ceram PL
	C25	74.5161	470 pF -20 +80% ceram PL
	C26	74.5118	47 pF 5% ceram TB
	C27	74.5116	33 pF 5% ceram TB
	C28	74.5161	470 pF -20 +80% ceram PL
	C29	74.5109	10 nF -20 +80% ceram PL
	C30	74.5155	1 nF -20 +80% ceram PL
	C31	74.5116	33 pF 5% ceram TB
	C32	74.5116	33 pF 5% ceram TB
	C33	76.5059	2.2 nF 10% polyester, FL
	C34	76.5061	4.7 nF 10% polyester, FL
	C35	76.5102	100 pF 2.5% polystyr TB
	C36	76.5106	470 pF 2.5% polystyr TB
	C37	76.5059	2.2 nF 10% polyester, FL
	C38	74.5191	33 pF 5% ceram TB
	C39	78.5044	2-18 pF trimmer
	C40	74.5135	10 pF 5% ceram DI
	C41	74.5198	1 nF -20 +50% ceram FT
	R1	80.5255	3.3 k Ω 5% carbon film
	R2	80.5243	330 Ω 5%
	R3	80.5237	100 Ω 5%
	R4	80.5237	100 Ω 5%

TYPE	NO.	CODE	DATA
	R5	80.5266	27 k Ω 5% carbon film
	R6	80.5254	2.7 k Ω 5%
	R7	80.5237	100 Ω 5%
	R8	80.5237	100 Ω 5%
	R9	80.5273	0.1 M Ω 5%
	R10	80.5263	15 k Ω 5%
	R11	80.5231	33 Ω 5%
	R12	80.5237	100 Ω 5%
	R13	80.5237	100 Ω 5%
	R14	80.5270	56 k Ω 5%
	R15	80.5259	6.8 k Ω 5%
	R16	80.5237	100 Ω 5%
	R17	80.5247	680 Ω 5%
	R18	80.5237	100 Ω 5%
	R19	80.5243	330 Ω 5%
	R20	80.5265	22 k Ω 5%
	R21	80.5262	12 k Ω 5%
	R22	80.5036	82 Ω 5%
	L1	62.0814	RF coil 420 - 470 MHz
	L2	61.1117	IF coil 10.7 MHz
	L3	62.0812	RF coil 409.3 - 459.3 MHz
	L4	62.0815	RF coil 409.3 - 459.3 MHz
	L5	62.0813	RF coil 409.3 - 459.3 MHz
	L6	61.1118	RF coil 204 - 230 MHz
	L7	61.1119	RF coil 102 - 115 MHz
	L8	61.1120	RF coil 34 - 38.5 MHz
	L9	61.1121	RF coil 34 - 38.5 MHz
	Q1	99.5245	2N5245 Transistor FET
	Q2	99.5217	2N918 Transistor
	Q3	99.5168	BF173 Transistor
	Q4	99.5168	BF173 Transistor
	Q5	99.5139	BSX19 Transistor

RECEIVER CONVERTER RC761

X401.332 / 2



IF CONVERTER IC701

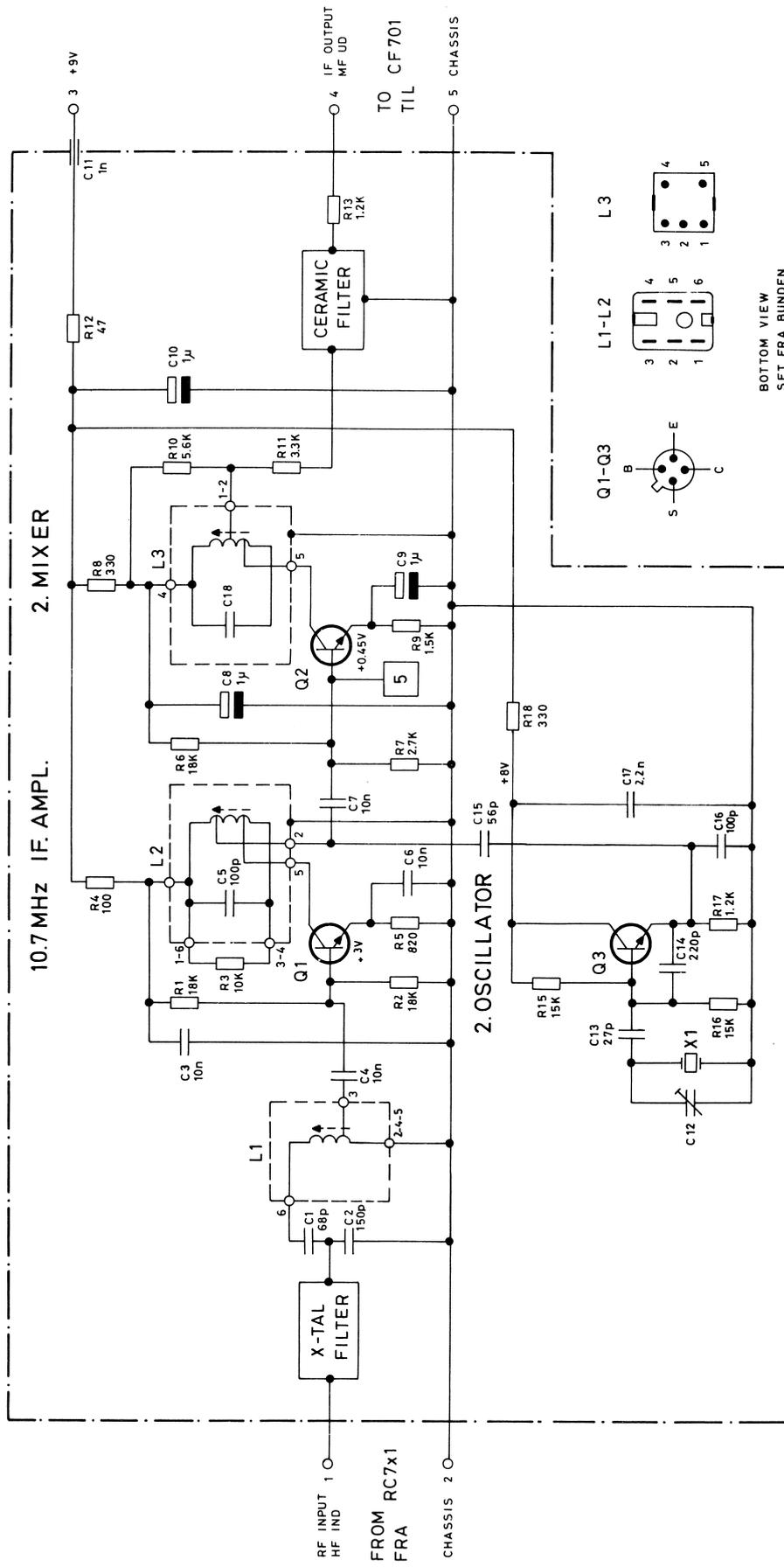
D401.326

TYPE	NO.	CODE	DATA
IC701		10. 2435	IF Converter
	C1	76. 5101	68 pF 2.5% polystyr TB
	C2	76. 5103	150 pF 2.5% polystyr TB
	C3	76. 5070	10 nF 10% polyest. FL
	C4	76. 5070	10 nF 10% polyest. FL
	C5	76. 5102	100 pF 2.5% polystyr TB
	C6	76. 5070	10 nF 10% polyest. FL
	C7	76. 5070	10 nF 10% polyest. FL
	C8	73. 5114	1 μ F 20% tantal
	C9	73. 5114	1 μ F 20% tantal
	C10	73. 5114	1 μ F 20% tantal
	C11	74. 5167	1 nF -20 +80% ceram FT
	C12	78. 5044	2-18 pF trimmer
	C13	74. 5192	27 pF 5% ceram TB
	C14	76. 5104	220 pF 2.5% polystyr TB
	C15	74. 5111	56 pF 5% ceram
	C16	76. 5102	100 pF 2.5% polystyr TB
	C17	76. 5059	2.2 nF 10% polyest. FL
	C18		See Ceramic Filter
	R1	80. 5264	18 k Ω 5% carbon film
	R2	80. 5264	18 k Ω 5% "
	R3	80. 5261	10 k Ω 5% "
	R4	80. 5237	100 Ω 5% "
	R5	80. 5248	820 Ω 5% "
	R6	80. 5264	18 k Ω 5% "
	R7	80. 5254	2.7 k Ω 5% "
	R8	80. 5243	330 Ω 5% "
	R9	80. 5251	1.5 k Ω 5% "
	R10	80. 5250	1.2 k Ω 5% "
	R11	80. 5246	560 Ω 5% "
	R12	80. 5233	47 Ω 5% "
	R13	80. 5245	470 Ω 5% "
	R14	80. 5249	1 k Ω 5% "
	R15	80. 5263	15 k Ω 5% "
	R16	80. 5263	15 k Ω 5% "
	R17	80. 5250	1.2 k Ω 5% "
	R18	80. 5243	330 Ω 5% "
	L1	61. 1122	IF coil 10.7 MHz
	L2	61. 1123	IF coil 10.7 MHz
	L3		See Ceramic Filter
	X1	98. 5010	Crystal 10.2450 MHz Type 98-12
	X1	98. 5011	Crystal 11.1550 MHz Type 98-12
		69. 5015	Crystal Filter 10.7 MHz

TYPE	NO.	CODE	DATA
		69. 5013	Ceramic Filter 455 kHz L3 and C18 included
	Q1	99. 5168	BF167 Transistor
	Q2	99. 5173	BF173 Transistor
	Q3	99. 5168	BF167 Transistor

IF CONVERTER IC701

X401. 315



IF CONVERTER IC703

D401.327

Storno

TYPE	NO.	CODE	DATA
IC703		10.2432	IF Converter
	C1	76.5101	68 pF 2.5% polystyr TB 25V
	C2	76.5103	150 pF 2.5% polystyr TB 25V
	C3	76.5070	10 nF 10% polyest. FL 50V
	C4	76.5070	10 nF 10% polyest. FL 50V
	C5	76.5102	100 pF 2.5% polystyr TB 25V
	C6	76.5070	10 nF 10% polyest. FL 50V
	C7	76.5070	10 nF 10% polyest. FL 50V
	C8	73.5114	1 nF 20% tantal 35V
	C9	73.5114	1 nF 20% tantal 35V
	C10	73.5114	1 μ F 20% tantal 35V
	C11	74.5167	1 nF -20 +80% ceram FT 300V
	C12	78.5044	2-18 pF trimmer 300V
	C13	74.5192	27 pF 5% ceram TB 160V
	C14	76.5104	220 pF 2.5% polystyr TB 25V
	C15	74.5111	56 pF 5% ceram TB 160V
	C16	76.5102	100 pF 2.5% polystyr TB 25V
	C17	76.5059	2.2 nF 10% polyest. FL 50V
	C18		See Ceramic Filter
	R1	80.5264	18 k Ω 5% carbon film 1/8W
	R2	80.5264	18 k Ω 5% " 1/8W
	R3	80.5261	10 k Ω 5% " 1/8W
	R4	80.5237	100 Ω 5% " 1/8W
	R5	80.5248	820 Ω 5% " 1/8W
	R6	80.5264	18 k Ω 5% " 1/8W
	R7	80.5254	2.7 k Ω 5% " 1/8W
	R8	80.5243	330 Ω 5% " 1/8W
	R9	80.5254	2.7 k Ω 5% " 1/8W
	R10	80.5258	5.6 k Ω 5% " 1/8W
	R11	80.5255	3.3 k Ω 5% " 1/8W
	R12	80.5233	47 Ω 5% " 1/8W
	R13	80.5250	1.2 k Ω 5% " 1/8W
	R15	80.5263	15 k Ω 5% " 1/8W
	R16	80.5263	15 k Ω 5% " 1/8W
	R17	80.5250	1.2 k Ω 5% " 1/8W
	R18	80.5243	330 Ω 5% " 1/8W
	L1	61.1122	IF coil 10.7 MHz
	L2	61.1123	IF coil 10.7 MHz
	L3		See Ceramic Filter
	X1	98.5010	Crystal 10.2450 MHz Type 98-12
	X1	98.5011	Crystal 11.1550 MHz Type 98-12
		69.5016	Crystal Filter 10.7 MHz
		69.5014	Ceramic Filter 455 kHz
			L3 and C18 included

Storno

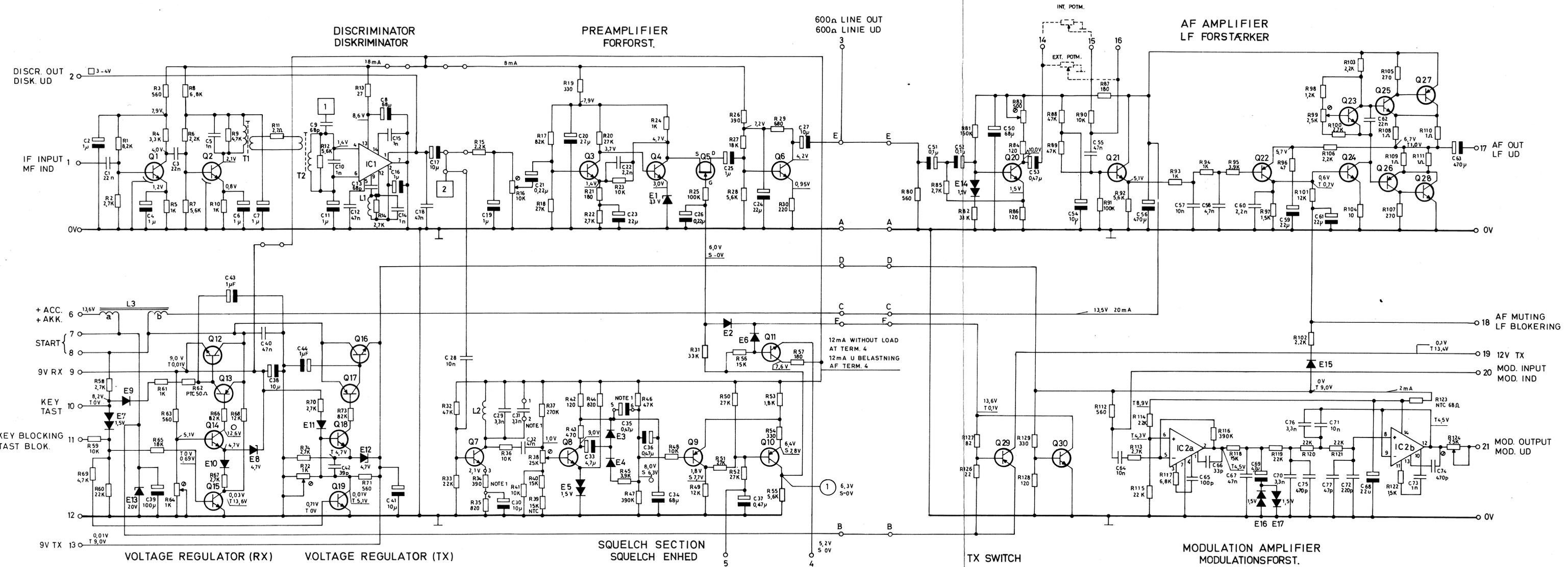
TYPE	NO.	CODE	DATA
	Q1	99.5168	BF167 Transistor
	Q2	99.5166	BF173 Transistor
	Q3	99.5168	BF167 Transistor

IF CONVERTER IC703

X401.314

LOWER PRINTED WIRING BOARD

UPPER PRINTED WIRING BOARD



DEPENDING ON THE CHANNEL SEPARATION EMPLOYED MAKE THE FOLLOWING ALTERATIONS:

POINTS CH. SEP	1-2	3-4	5-6	
12.5 kHz	3.3nF	150Ω	0.47μF	REPLACE R119, R120, R121, BY 27KΩ
20/25 kHz	3.3nF	390Ω	0.47μF	
50 kHz	OPEN	820Ω	OPEN	

CONDITIONS OF MEASUREMENTS

- MEASURED AT $\Delta f = 0$ kHz
- △ RESISTOR R83 SHORT-CIRCUITED
- S SQUELCHED CONDITION
- T TRANSMITTER KEYS CONDITION
- USE A HIGH-RESISTANCE VOLTMETER (2MΩ)

REPLACE R119, R120, R121, BY 27KΩ

COMMON FUNCTION UNIT CF701 FÆLLESENHED

TYPE	NO.	CODE	DATA
CF 701		10.2433	Common Functions Unit
	C1	76.5071	22 nF 10% polyester. FL
	C2	73.5114	1 μ F 20% tantal
	C3	76.5071	22 nF 10% polyester. FL
	C4	73.5114	1 μ F 20% tantal
	C5	76.5109	1 nF 2.5% polyester. TB
	C6	73.5114	1 μ F 20% tantal
	C7	73.5114	1 μ F 20% tantal
	C8	73.5106	68 μ F 20% tantal
	C9	76.5101	68 pF 2.5% polystyr TB
	C10	76.5109	1 nF 2.5% polystyr TB
	C11	73.5114	1 μ F 20% tantal
	C12	76.5072	47 nF 10% polyester. FL
	C13	76.5101	68 pF 2.5% polystyr TB
	C14	76.5109	1 nF 2.5% polystyr TB
	C15	76.5069	1 nF 10% polyester FL
	C16	73.5114	1 μ F 20% tantal
	C17	73.5109	10 μ F 20% tantal
	C18	76.5072	47 nF 10% polyester FL
	C19	73.5114	1 μ F 20% tantal
	C20	73.5127	22 μ F 20% tantal
	C21	73.5118	0.22 μ F 20% tantal
	C22	76.5059	2.2 nF 10% polyester FL
	C23	73.5127	22 μ F 20% tantal
	C24	73.5127	22 μ F 20% tantal
	C25	73.5114	1 μ F 20% tantal
	C26	73.5118	0.22 μ F 20% tantal
	C27	73.5109	10 μ F 20% tantal
	C28	76.5070	10 nF 10% polyester FL
	C29	76.5060	3.3 nF 10% polyester. FL
	C30	73.5109	10 μ F 20% tantal
	C31	76.5060	3.3 nF 10% polyester. FL
	C32	76.5072	47 nF 10% polyester FL
	C33	73.5126	4.7 μ F 20% tantal
	C34	73.5106	68 μ F 20% tantal
	C35	73.5125	0.47 μ F 20% tantal
	C36	73.5125	0.47 μ F 20% tantal
	C37	73.5125	0.47 μ F 20% tantal
	C38	73.5011	10 μ F -10/+100% elco
	C39	73.5071	100 μ F -10/+100% elco
	C40	76.5072	47nF 10% polyester FL
	C41	43.5011	10 μ F -10+100% elco
	C42	74.5187	39pF 10% ceram N750 PL
	C43	73.5114	1 μ F 20% tantal
	C44	73.5114	1 μ F 20% tantal
	C50	73.5106	68 μ F 20% tantal
	C51	73.5089	0.1 μ F 20% tantal

TYPE	NO.	CODE	DATA
	C52	73.5089	0.1 μ F 20% tantal
	C53	73.5125	0.47 μ F 20% tantal
	C54	73.5109	10 μ F 20% tantal
	C55	76.5072	47 nF 10% polyester FL
	C56	73.5138	470 μ F -10/+50% elco
	C57	76.5070	10 nF 10% polyester. FL
	C58	76.5061	4.7 nF 10% polyester FL
	C59	73.5127	22 μ F 20% tantal
	C60	76.5059	2.2 nF 10% polyester FL
	C61	73.5127	22 μ F 20% tantal
	C62	76.5071	22 nF 10% polyester FL
	C63	73.5137	470 μ F -10/+50% elco
	C64	76.5070	10 nF 10% polyester FL
	C65	74.5165	100 pF 10% ceram PL
	C66	74.5116	33 pF 5% ceram TB
	C67	76.5072	47 nF 10% polyester FL
	C68	73.5127	22 μ F 20% tantal
	C69	73.5126	4.7 μ F 20% tantal
	C70	76.5060	3.3 nF 10% polyester. FL
	C71	76.5070	10 nF 10% polyester FL
	C72	76.5104	220 pF 5% polystyr TB
	C73	76.5069	1 nF 10% polyester FL
	C74	74.5161	470 pF -20/+80% ceram PL
	C75	76.5106	470 pF 5% polystyr TB
	C76	76.5060	3.3 nF 10% polyester. FL
	C77	76.5090	47 pF 5% polystyr
	R1	80.5260	8.2 k Ω 5% carbon film
	R2	80.5254	2.7 k Ω 5% " "
	R3	80.5246	560 Ω 5% " "
	R4	80.5255	3.3 k Ω 5% " "
	R5	80.5249	1 k Ω 5% " "
	R6	80.5253	2.2 k Ω 5% " "
	R7	80.5258	5.6 k Ω 5% " "
	R8	80.5259	6.8 k Ω 5% " "
	R9	80.5257	4.7 k Ω 5% " "
	R10	80.5249	1 k Ω 5% " "
	R11	80.5218	2.7 Ω 5% " "
	R12	80.5258	5.6 k Ω 5% " "
	R13	80.5230	27 Ω 5% " "
	R14	80.5254	2.7 k Ω 5% " "
	R15	80.5253	2.2 k Ω 5% " "

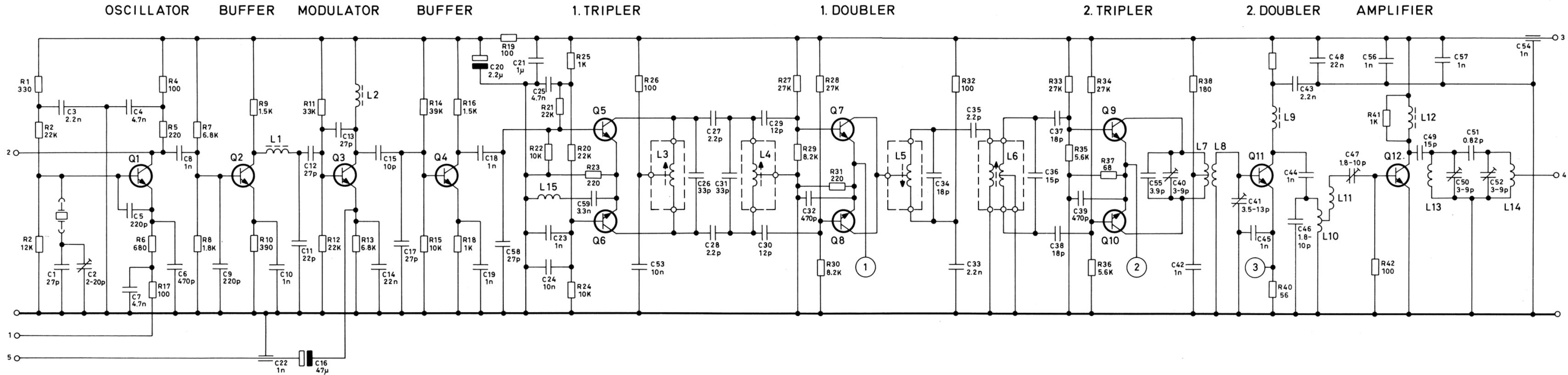
COMMON FUNCTIONS UNIT CF701

TYPE	NO.	CODE	DATA
	R111	80.5213	1 Ω 5% carbon film
	R112	80.5246	560 Ω 5% " "
	R113	80.5254	2.7 kΩ 5% " "
	R114	89.5062	22 kΩ 1% metal film
	R115	89.5062	22 kΩ 1% metal film
	R116	80.5280	0.39 MΩ 5% carbon film
	R117	80.5259	6.8 kΩ 5% " "
	R118	80.5263	15 kΩ 5% " "
	R119	89.5062	22 kΩ 1% metal film
	R120	89.5062	22 kΩ 1% metal film
	R121	89.5062	22 kΩ 1% metal film
	R122	80.5251	1.5 kΩ 5% carbon film
	R123	89.5061	68 Ω 20% NTC
	R124	86.5044	25 kΩ 20% potentiometer
	R126	80.5229	22 Ω 5% carbon film
	R127	84.5224	82 Ω 5% wire wound
	R128	80.5238	120 Ω 5% carbon film
	R129	80.5443	330 Ω 5% " "
	L1	61.1131	IF coil 455 kHz
	L2	61.1132	Coil 75 mH
	L3	60.5158	Cnoke
	T1	61.1130	IF Transformer 455 kHz
	T2	61.1130	IF Transformer 455 kHz
	E1	99.5210	Zenerdiode 3.3V 5%
	E2	99.5237	1N4148 Diode
	E3	99.5237	1N4148 Diode
	E4	99.5237	1N4148 Diode
	E5	99.5209	Stab. diode 1.5V
	E6	99.5237	1N4148 Diode
	E7	99.5209	Stab. diode 1.5V
	E8	99.5224	Zenerdiode 4.7V 5%
	E9	99.5237	1N4148 Diode
	E10	99.5237	1N4148 Diode
	E11	99.5237	1N4148 Diode
	E12	99.5224	Zenerdiode 4.7V 5%
	E13	99.5249	Zenerdiode BZY93/C20R
	E14	99.5209	Stab. diode 1.5V
	E15	99.5237	1N4148 Diode
	E16	99.5209	Stab. diode 1.5V
	E17	99.5209	Stab. diode 1.5V
	Q1	99.5166	BF167 Transistor
	Q2	99.5166	BF167 Transistor
	Q3	99.5143	BC108 Transistor
	Q4	99.5143	BC108 Transistor

TYPE	NO.	CODE	DATA
	Q5	99.5247	2N4302 Transistor FET
	Q6	99.5143	BC108 Transistor
	Q7	99.5143	BC108 Transistor
	Q8	99.5143	BC108 Transistor
	Q9	99.5115	BC179 Transistor
	Q10	99.5115	BC179 Transistor
	Q11	99.5143	BC108 Transistor
	Q12	99.5246	TIP 31 Transistor
	Q13	99.5144-01	BC214L Transistor
	Q14	99.5243	BC108 Transistor
	Q15	99.5243	BC108 Transistor
	Q16	99.5246	TIP 31 Transistor
	Q17	99.5144-01	BC214L Transistor
	Q18	99.5143	BC108 Transistor
	Q19	99.5143	BC108 Transistor
	Q20	99.5201	BC109 Transistor
	Q21	99.5201	BC109 Transistor
	Q22	99.5115	BC179 Transistor
	Q23	99.5143	BC108 Transistor
	Q24	99.5143	BC108 Transistor
	Q25	99.5143	BC108 Transistor
	Q26	99.5115	BC179 Transistor
	Q27	99.5236	BD136 Transistor
	Q28	99.5235	BD135 Transistor
	Q29	99.5248	SP2629 Transistor
	Q30	99.5235	BD135 Transistor
	IC1	14.5010	IF ampl./discr.
	IC2	14.5006	MC1437P dual OP amp.

COMMON FUNCTIONS UNIT CF701

X401.322/2

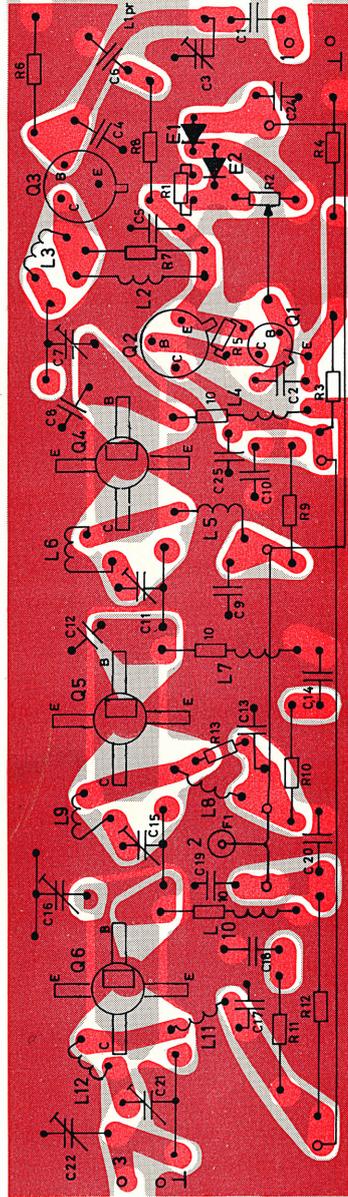
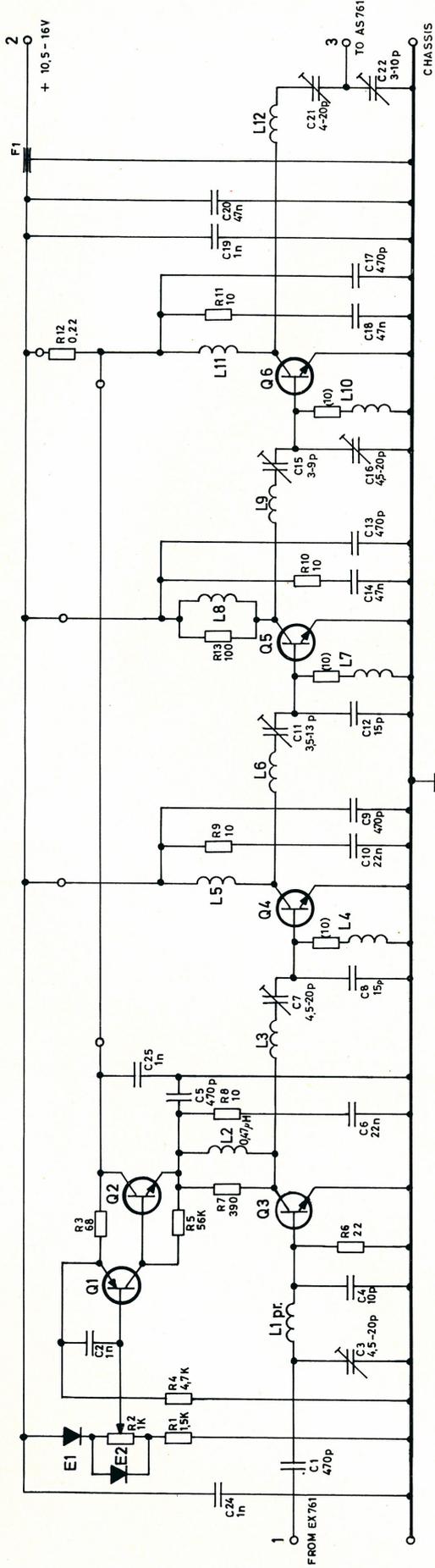


EXCITER EX761

D401.312

TYPE	NO.	CODE	DATA
EX761		10.2429	Exciter Unit
	C1	74.5192	27 pF 5% ceram TB
	C2	78.5044	2-18pF trimmer
	C3	76.5059	2.2 nF 10% polyester FL
	C4	76.5061	4.7 nF 10% polyester FL
	C5	76.5104	220 pF 2.5% polystyr TB
	C6	76.5106	470 pF 2.5% polystyr TB
	C7	76.5061	4.7 nF 10% polyester FL
	C8	74.5155	1 nF -20/+50% ceram PL
	C9	76.5104	220 pF 2.5% polystyr TB
	C10	76.5069	1 nF 10% polyester FL
	C11	74.5106	22 pF 5% ceram TB
	C12	74.5107	27 pF 5% ceram TB
	C13	74.5107	27 pF 5% ceram TB
	C14	76.5071	22 pF 10% polyester FL
	C15	74.5135	10 pF 5% ceram DI
	C16	73.5124	47 μ F 20% tantal
	C17	74.5107	27 pF 5% ceram TB
	C18	74.5155	1 nF -20/+50% ceram PL
	C19	76.5069	1 nF 10% polyester FL
	C20	73.5129	2.2 μ F 20% tantal
	C21	73.5135	1 μ F 20% tantal
	C22	74.5167	1 nF -20/+80% ceram FT
	C23	74.5155	1 nF -20/+50% ceram PL
	C24	76.5070	10 nF 10% polyester FL
	C25	76.5061	4.7 nF 10% polyester FL
	C26	74.5116	33 pF 5% ceram TB
	C27	74.5127	2.2 pF \pm 0.25 pF ceram BD
	C28	74.5127	2.2 pF \pm 0.25 pF ceram BD
	C29	74.5136	12 pF 5% ceram DI
	C30	74.5136	12 pF 5% ceram DI
	C31	74.5161	33 pF 5% ceram TB
	C32	74.5161	470 pF -20/+50% ceram PL
	C33	76.5059	2.2 nF 10% polyester FL
	C34	74.5138	18 pF 5% ceram DI
	C35	74.5127	2.2 pF \pm 0.25pF ceram BD
	C36	74.5137	15 pF 5% ceram DI
	C37	74.5138	18 pF 5% ceram DI
	C38	74.5138	18 pF 5% ceram DI
	C39	74.5161	470 pF -20/+50% ceram PL
	C40	78.5050	3-9 pF trimmer
	C41	78.5025	3.5 - 13 pF trimmer
	C42	74.5155	1 nF -20/+50% ceram PL
	C43	74.5163	2.2 nF -20/+50% ceram PL
	C44	74.5155	1 nF -20/+50% ceram PL
	C45	74.5155	1 nF -20/+50% ceram PL
	C46	78.5048	1.8 - 10 pF trimmer

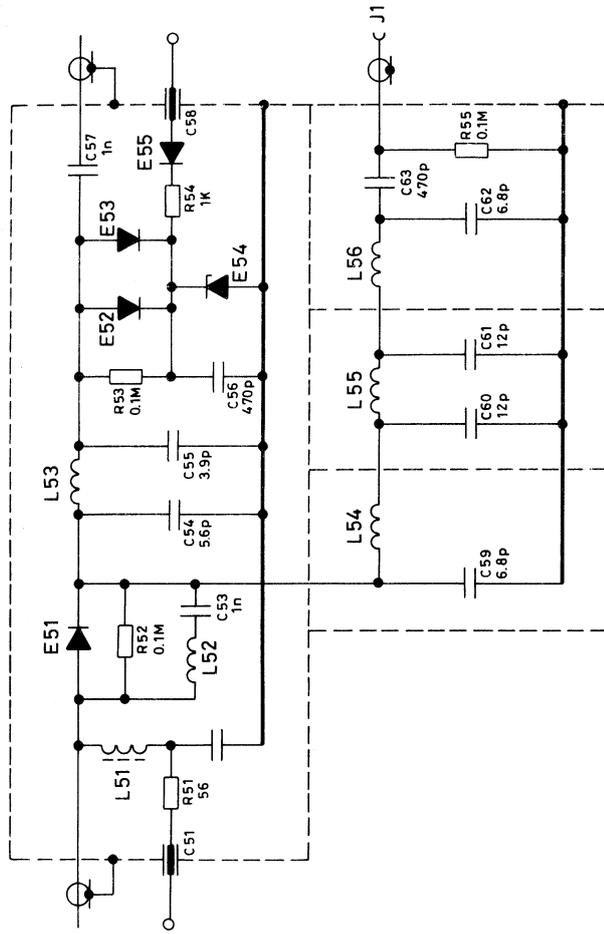
TYPE	NO.	CODE	DATA
	C47	78.5048	1.8 - 10 pF trimmer
	C48	76.5071	22 nF 10% polyester FL
	C49	74.5137	15 pF 5% ceram DI
	C50	78.5050	3-9 pF trimmer
	C51	74.5122	0.82 pF \pm 0.1 pF ceram BD
	C52	78.5050	3-9 pF trimmer
	C53	76.5070	10 nF 10% polyester FL
	C54	74.5167	1 nF -20/+80% ceram FT
	C55	74.5130	3.9 pF \pm 0.25 pF ceram DI
	C56	74.5155	1 nF -20/+50% ceram PL
	C57	74.5155	1 nF -20/+50% ceram PL
	C58	74.5107	27 pF 5% ceram TB
	C59	76.5060	3.3 nF 10% polyester FL
	R1	80.5243	330 Ω 5% carbon film
	R2	80.5265	22 k Ω 5% " "
	R3	80.5262	12 k Ω 5% " "
	R4	80.5237	100 Ω 5% " "
	R5	80.5241	220 Ω 5% " "
	R6	80.5247	680 Ω 5% " "
	R7	80.5259	6.8 k Ω 5% " "
	R8	80.5252	1.8 k Ω 5% " "
	R9	80.5251	1.5 k Ω 5% " "
	R10	80.5244	390 Ω 5% " "
	R11	80.5267	33 k Ω 5% " "
	R12	80.5265	22 k Ω 5% " "
	R13	80.5259	6.8 k Ω 5% " "
	R14	80.5268	39 k Ω 5% " "
	R15	80.5261	10 k Ω 5% " "
	R16	80.5251	1.5 k Ω 5% " "
	R17	80.5237	100 Ω 5% " "
	R18	80.5249	1 k Ω 5% " "
	R19	80.5237	100 Ω 5% " "
	R20	80.5265	22 k Ω 5% " "
	R21	80.5265	22 k Ω 5% " "
	R22	80.5261	10 k Ω 5% " "
	R23	80.5241	220 Ω 5% " "
	R24	80.5261	10 k Ω 5% " "
	R25	80.5249	1 k Ω 5% " "
	R26	80.5237	100 Ω 5% " "
	R27	80.5266	27 k Ω 5% " "
	R28	80.5266	27 k Ω 5% " "



PRINTED CIRCUIT VIEWED FROM COMPONENT SIDE
TRYKT KREDSLØB SET FRA KOMPONENTSIDEN

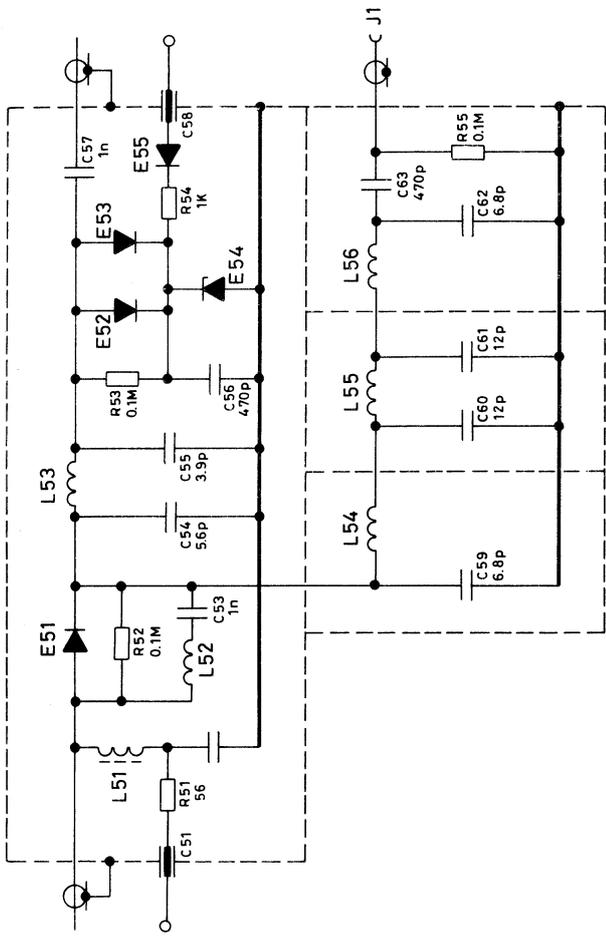
POWER AMPLIFIER PA761

D 401.324/3



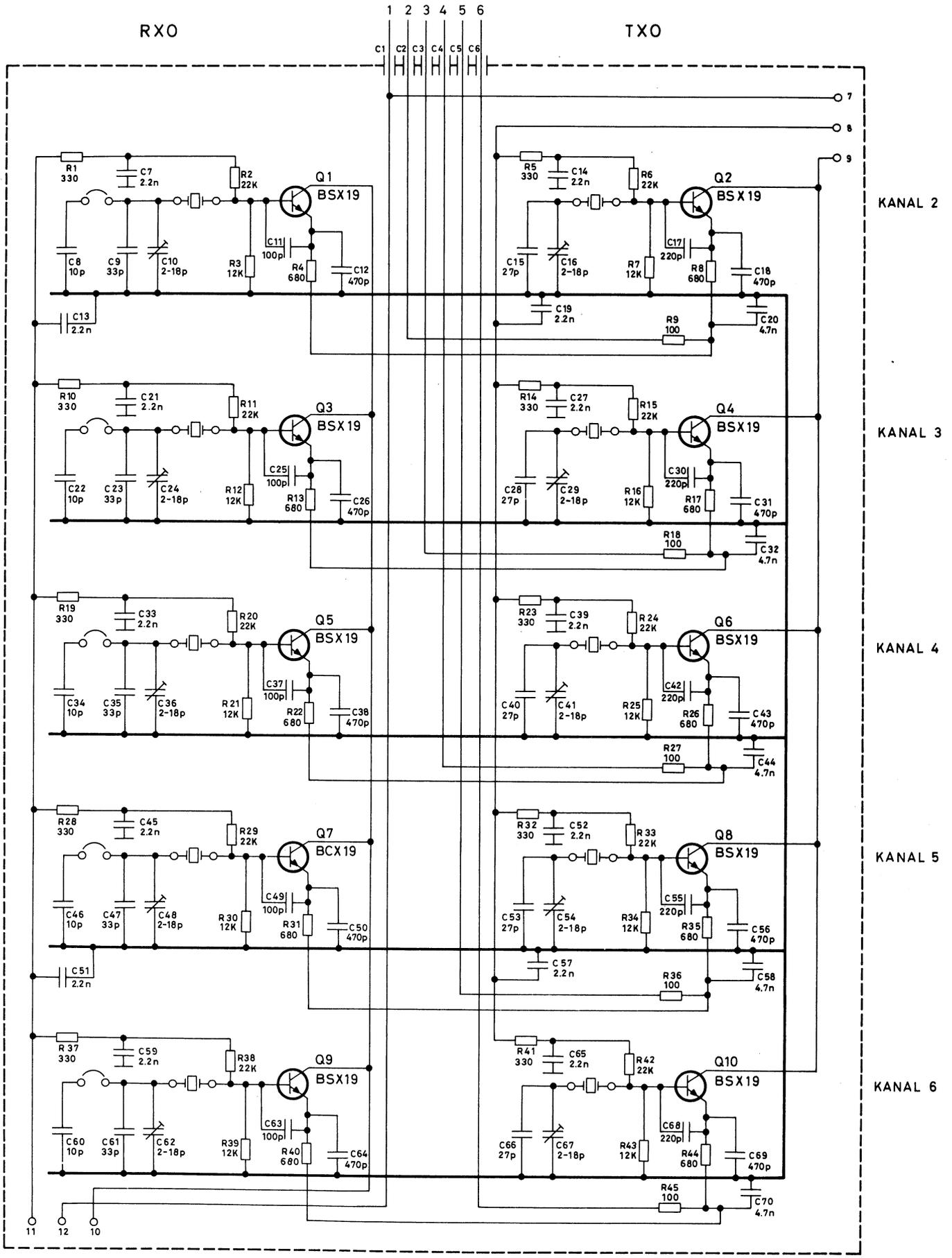
ANTENNA SWITCH AS761

D401.334

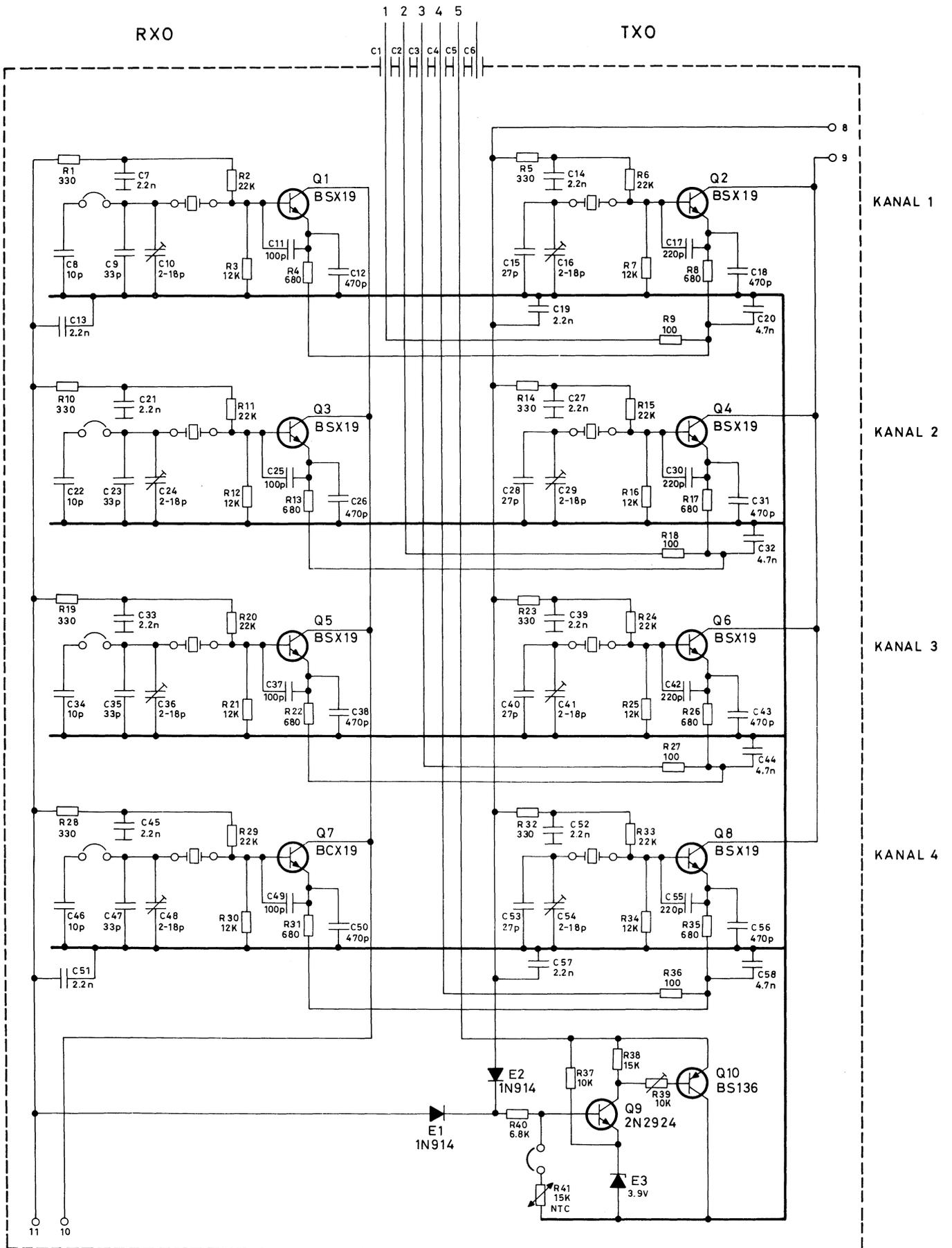


ANTENNA SWITCH AS761

D401.334



CRYSTAL SWITCH UNIT XS701



CRYSTAL SWITCH UNIT XS702

TYPE	NO.	CODE	DATA
XS702		10.2437	Crystal Switch Unit
	C1	74.5167	1 nF -20 +80% ceram FT 300V
	C2	74.5167	1 nF -20 +80% ceram FT 300V
	C3	74.5167	1 nF -20 +80% ceram FT 300V
	C4	74.5167	1 nF -20 +80% ceram FT 300V
	C5	74.5167	1 nF -20 +80% ceram FT 300V
	C6	74.5167	1 nF -20 +80% ceram FT 300V
	C7	74.5167	1 nF -20 +80% ceram FT 300V
	C8	76.5059	2.2 nF 10% polyest. FL 50V
	C9	74.5135	10 pF 5% ceram DI 125V
	C10	74.5191	33 pF 5% ceram TB 160V
	C11	78.5044	2-18 pF trimmer 300V
	C12	76.5102	100 pF 2.5% polystyr TB 25V
	C13	76.5106	470 pF 2.5% polystyr TB 25V
	C14	76.5071	22 nF 10% polyest. FL 50V
	C15	76.5059	2.2 nF 10% polyest. FL 50V
	C16	74.5192	27 pF 5% ceram TB 160V
	C17	78.5044	2-18 pF trimmer 300V
	C18	76.5102	220 pF 2.5% polystyr TB 25V
	C19	76.5106	470 pF 2.5% polystyr TB 25V
	C20	76.5071	22 nF 10% polyest. FL 50V
	C21	76.5059	4.7 nF 10% polyest. FL 50V
	C22	74.5135	10 pF 5% ceram DI 125V
	C23	74.5191	33 pF 5% ceram TB 160V
	C24	78.5044	2-18 pF trimmer 300V
	C25	76.5102	100 pF 2.5% polystyr TB 25V
	C26	76.5106	470 pF 2.5% polystyr TB 25V
	C27	76.5059	2.2 nF 10% polyest. FL 50V
	C28	74.5192	27 pF 5% ceram TB 160V
	C29	78.5044	2-18 pF trimmer 300V
	C30	76.5104	220 pF 2.5% polystyr TB 25V
	C31	76.5106	470 pF 2.5% polystyr TB 2.5%
	C32	76.5061	4.7 nF 10% polyest. FL 50V
	C33	76.5059	2.2 nF 10% polyest. FL 50V
	C34	74.5135	10 pF 5% ceram DI 125V
	C35	74.5191	33 pF 5% ceram TB 160V
	C36	78.5044	2-18 pF trimmer 300V
	C37	76.5102	100 pF 2.5% polystyr TB 25V
	C38	76.5106	470 pF 2.5% polystyr TB 25V
	C39	76.5059	2.2 nF 10% polyest. FL 50V
	C40	74.5192	27 pF 5% ceram TB 160V
	C41	78.5044	2-18 pF trimmer 300V
	C42	76.5104	220 pF 2.5% polystyr TB 25V
	C43	76.5106	470 pF 2.5% polystyr TB 25V
	C44	76.5061	4.7 nF 10% polyest. FL 50V
	C45	76.5059	2.2 nF 10% polyest. FL 50V
	C46	74.5135	10 pF 5% ceram DI 125V

TYPE	NO.	CODE	DATA
	C47	74.5191	33 pF 5% ceram TB 160V
	C48	78.5044	2-18 pF trimmer 300V
	C49	76.5102	100 pF 2.5% polystyr TB 25V
	C50	76.5106	470 pF 2.5% polystyr TB 25V
	C51	76.5071	22 nF 10% polyest. FL 50V
	C52	76.5059	2.2 nF 10% polyest. FL 50V
	C53	74.5192	27 pF 5% ceram TB 160V
	C54	78.5044	2-18 pF trimmer 300V
	C55	76.5104	220 pF 2.5% polystyr TB 25V
	C56	76.5106	470 pF 2.5% polystyr TB 25V
	C57	76.5071	22 nF 10% polyest. FL 50V
	C58	76.5061	4.7 nF 10% polyest. FL 50V
	R1	80.5243	330 Ω 5% carbon film 1/8W
	R2	80.5265	22 kΩ 5% " " 1/8W
	R3	80.5262	12 kΩ 5% " " 1/8W
	R4	80.5247	680 Ω 5% " " 1/8W
	R5	80.5243	330 Ω 5% " " 1/8W
	R6	80.5265	22 kΩ 5% " " 1/8W
	R7	80.5262	12 kΩ 5% " " 1/8W
	R8	80.5247	680 Ω 5% " " 1/8W
	R9	80.5237	100 Ω 5% " " 1/8W
	R10	80.5243	330 Ω 5% " " 1/8W
	R11	80.5265	22 kΩ 5% " " 1/8W
	R12	80.5262	12 kΩ 5% " " 1/8W
	R13	80.5247	680 Ω 5% " " 1/8W
	R14	80.5243	330 Ω 5% " " 1/8W
	R15	80.5265	22 kΩ 5% " " 1/8W
	R16	80.5262	12 kΩ 5% " " 1/8W
	R17	80.5247	680 Ω 5% " " 1/8W
	R18	80.5237	100 Ω 5% " " 1/8W
	R19	80.5243	330 Ω 5% " " 1/8W
	R20	80.5265	22 kΩ 5% " " 1/8W
	R21	80.5262	12 kΩ 5% " " 1/8W
	R22	80.5247	680 Ω 5% " " 1/8W
	R23	80.5243	330 Ω 5% " " 1/8W
	R24	80.5265	22 kΩ 5% " " 1/8W
	R25	80.5262	12 kΩ 5% " " 1/8W
	R26	80.5247	680 Ω 5% " " 1/8W
	R27	80.5237	100 Ω 5% " " 1/8W
	R28	80.5243	330 Ω 5% " " 1/8W
	R29	80.5265	22 kΩ 5% " " 1/8W

CRYSTAL SWITCH UNIT XS702

X401.331/2

Storno

TYPE	NO.	CODE	DATA
	R30	80. 5262	12 k Ω 5% carbon film
	R31	80. 5247	680 Ω 5% "
	R32	80. 5243	330 Ω 5% "
	R33	80. 5265	22 k Ω 5% "
	R34	80. 5264	12 k Ω 5% "
	R35	80. 5247	680 Ω 5% "
	R36	80. 5237	100 Ω 5% "
	R37	80. 5261	10 k Ω 5% "
	R38	80. 5263	15 k Ω 5% "
	R39	86. 5068	10 k Ω 20% potentiometer
	R40	80. 5259	6.8 k Ω 5% carbon film
	R41	89. 5060	1.5 k Ω 5% NTC
	E1	99. 5028	1N914 Diode
	E2	99. 5028	1N914 Diode
	E3	99. 5225	Zenerdiode 3.9V 5%
	Q1	99. 5139	BSX19 Transistor
	Q2	99. 5139	BSX19 Transistor
	Q3	99. 5139	BSX19 Transistor
	Q4	99. 5139	BSX19 Transistor
	Q5	99. 5139	BSX19 Transistor
	Q6	99. 5139	BSX19 Transistor
	Q7	99. 5139	BSX19 Transistor
	Q8	99. 5139	BSX19 Transistor
	Q9	99. 5117	2N2924 Transistor
	Q10	99. 5236	BD136 Transistor

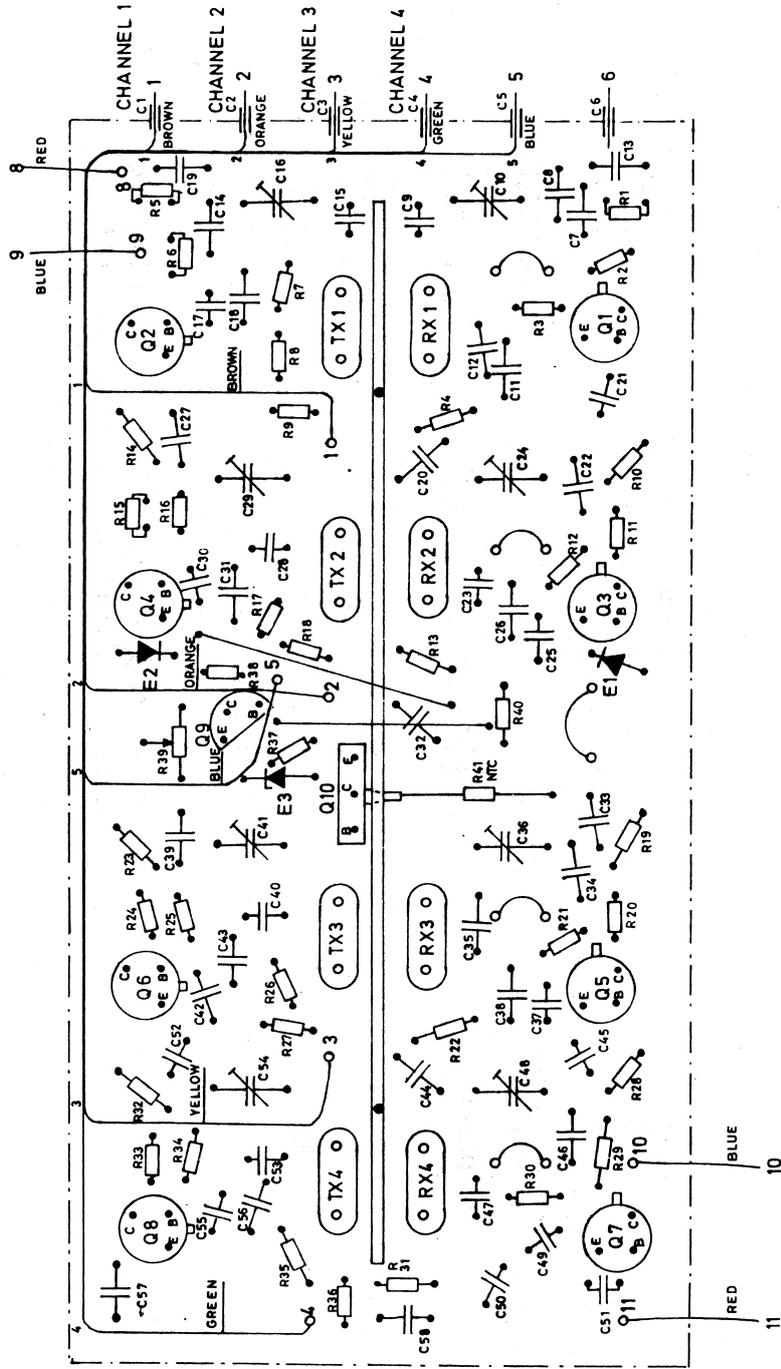
1/8W
1/8W
1/8W
1/8W
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1/8W
1/8W
0.5W
1/8W
0.5W

Storno

TYPE	NO.	CODE	DATA

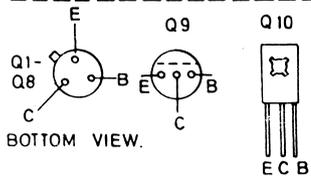
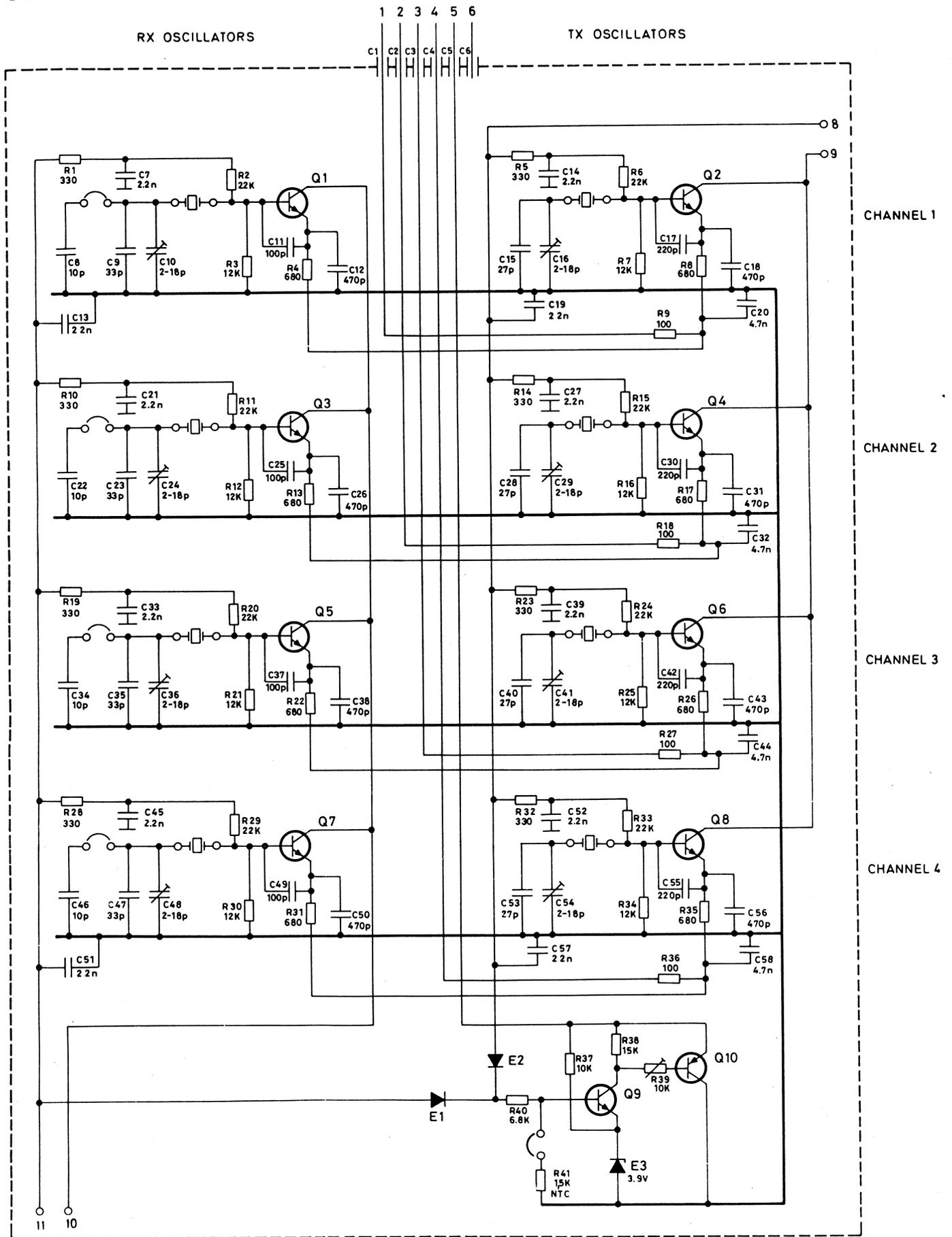
CRYSTAL SWITCH UNIT XS702

X401.331/2



PRINTED CIRCUIT VIEWED FROM COMPONENT SIDE

CRYSTAL OSCILLATOR PANEL XS702



CRYSTAL SWITCH UNIT XS702

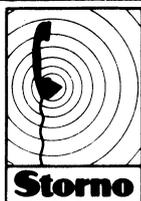
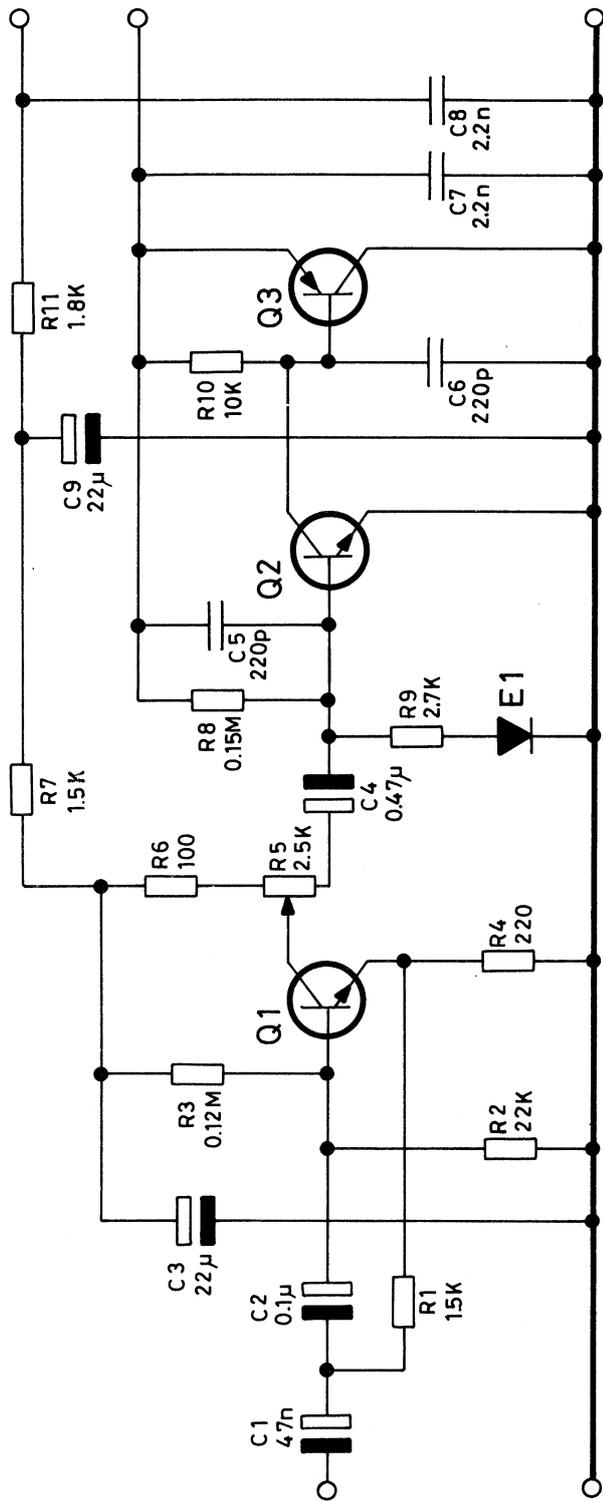
D 401.329/2

TYPE	NO.	CODE	DATA
XS702		10.2437	Crystal Switch Unit
	C1	74.5167	1 nF -20 +80% ceram FT
	C2	74.5167	1 nF -20 +80% ceram FT
	C3	74.5167	1 nF -20 +80% ceram FT
	C4	74.5167	1 nF -20 +80% ceram FT
	C5	74.5167	1 nF -20 +80% ceram FT
	C6	74.5167	1 nF -20 +80% ceram FT
	C7	76.5059	2.2 nF 10% polyest. FL
	C8	74.5135	10 pF 5% ceram DI
	C9	74.5191	33 pF 5% ceram TB
	C10	78.5044	2-18 pF trimmer
	C11	76.5102	100 pF 2.5% polystyr TB
	C12	76.5106	470 pF 2.5% polystyr TB
	C13	76.5071	22 nF 10% polyest. FL
	C14	76.5059	2.2 nF 10% polyest. FL
	C15	74.5192	27 pF 5% ceram TB
	C16	78.5044	2-18 pF trimmer
	C17	76.5104	220 pF 2.5% polystyr TB
	C18	76.5106	470 pF 2.5% polystyr TB
	C19	76.5071	22 nF 10% polyest. FL
	C20	76.5061	4.7 nF 10% polyest. FL
	C21	76.5059	2.2 nF 10% polyest. FL
	C22	74.5135	10 pF 5% ceram DI
	C23	74.5191	33 pF 5% ceram TB
	C24	78.5044	2-18 pF trimmer
	C25	76.5102	100 pF 2.5% polystyr TB
	C26	76.5106	470 pF 2.5% polystyr TB
	C27	76.5059	2.2 nF 10% polyest. FL
	C28	74.5192	27 pF 5% ceram TB
	C29	78.5044	2-18 pF trimmer
	C30	76.5104	220 pF 2.5% polystyr TB
	C31	76.5106	470 pF 2.5% polystyr TB
	C32	76.5061	4.7 nF 10% polyest. FL
	C33	76.5059	2.2 nF 10% polyest. FL
	C34	74.5135	10 pF 5% ceram DI
	C35	74.5191	33 pF 5% ceram TB
	C36	78.5044	2-18 pF trimmer
	C37	76.5102	100 pF 2.5% polystyr TB
	C38	76.5106	470 pF 2.5% polystyr TB
	C39	76.5059	2.2 nF 10% polyest. FL
	C40	74.5192	27 pF 5% ceram TB
	C41	78.5044	2-18 pF trimmer
	C42	76.5104	220 pF 2.5% polystyr TB
	C43	76.5106	470 pF 2.5% polystyr TB
	C44	76.5061	4.7 nF 10% polyest. FL
	C45	76.5059	2.2 nF 10% polyest. FL
	C46	74.5135	10 pF 5% ceram DI

TYPE	NO.	CODE	DATA
	C47	74.5191	33 pF 5% ceram TB
	C48	78.5044	2-18 pF trimmer
	C49	76.5102	100 pF 2.5% polystyr TB
	C50	76.5106	470 pF 2.5% polystyr TB
	C51	76.5071	22 nF 10% polyest. FL
	C52	76.5059	2.2 nF 10% polyest. FL
	C53	74.5192	27 pF 5% ceram TB
	C54	78.5044	2-18 pF trimmer
	C55	76.5104	220 pF 2.5% polystyr TB
	C56	76.5106	470 pF 2.5% polystyr TB
	C57	76.5071	22 nF 10% polyest. FL
	C58	76.5061	4.7 nF 10% polyest. FL
	R1	80.5243	330 Ω 5% carbon film
	R2	80.5265	22 kΩ 5% "
	R3	80.5262	12 kΩ 5% "
	R4	80.5247	680 Ω 5% "
	R5	80.5243	330 Ω 5% "
	R6	90.5265	22 kΩ 5% "
	R7	80.5262	12 kΩ 5% "
	R8	80.5247	680 Ω 5% "
	R9	80.5237	100 Ω 5% "
	R10	80.5243	330 Ω 5% "
	R11	80.5265	22 kΩ 5% "
	R12	80.5262	12 kΩ 5% "
	R13	80.5247	680 Ω 5% "
	R14	80.5243	330 Ω 5% "
	R15	80.5265	22 kΩ 5% "
	R16	80.5262	12 kΩ 5% "
	R17	80.5247	680 Ω 5% "
	R18	80.5237	100 Ω 5% "
	R19	80.5243	330 Ω 5% "
	R20	80.5265	22 kΩ 5% "
	R21	80.5262	12 kΩ 5% "
	R22	80.5247	680 Ω 5% "
	R23	80.5243	330 Ω 5% "
	R24	80.5265	22 kΩ 5% "
	R25	80.5262	12 kΩ 5% "
	R26	80.5247	680 Ω 5% "
	R27	80.5237	100 Ω 5% "
	R28	80.5243	330 Ω 5% "
	R29	80.5265	22 kΩ 5% "

CRYSTAL SWITCH UNIT XS702

X401.531/2



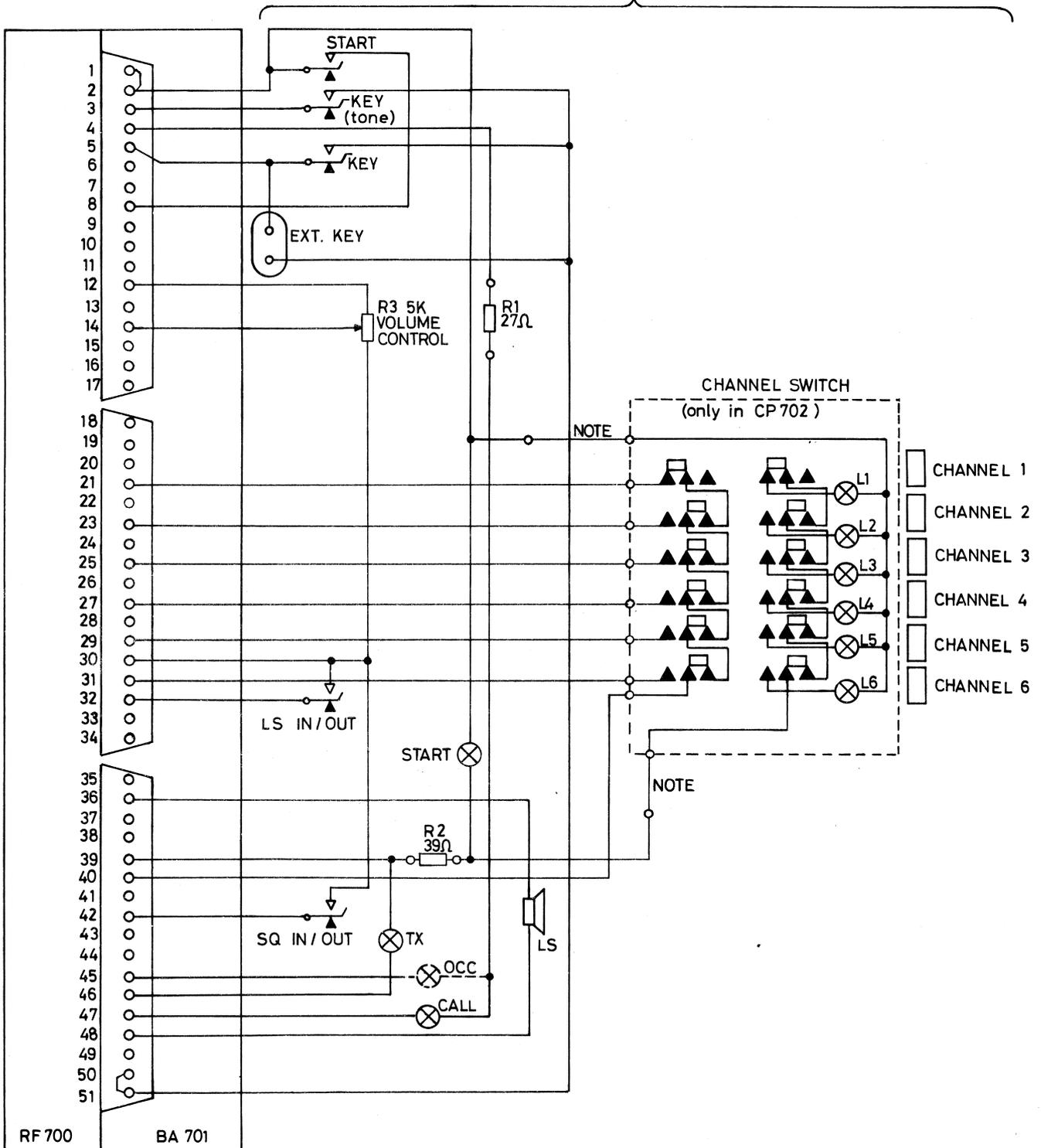
konstr./tegn.
HJS/ KSP
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komp.liste

AF-AMPLIFIER
LF-FORSTÆRKER AA701

KODE

TEGN. NR.
D401.216
A 4

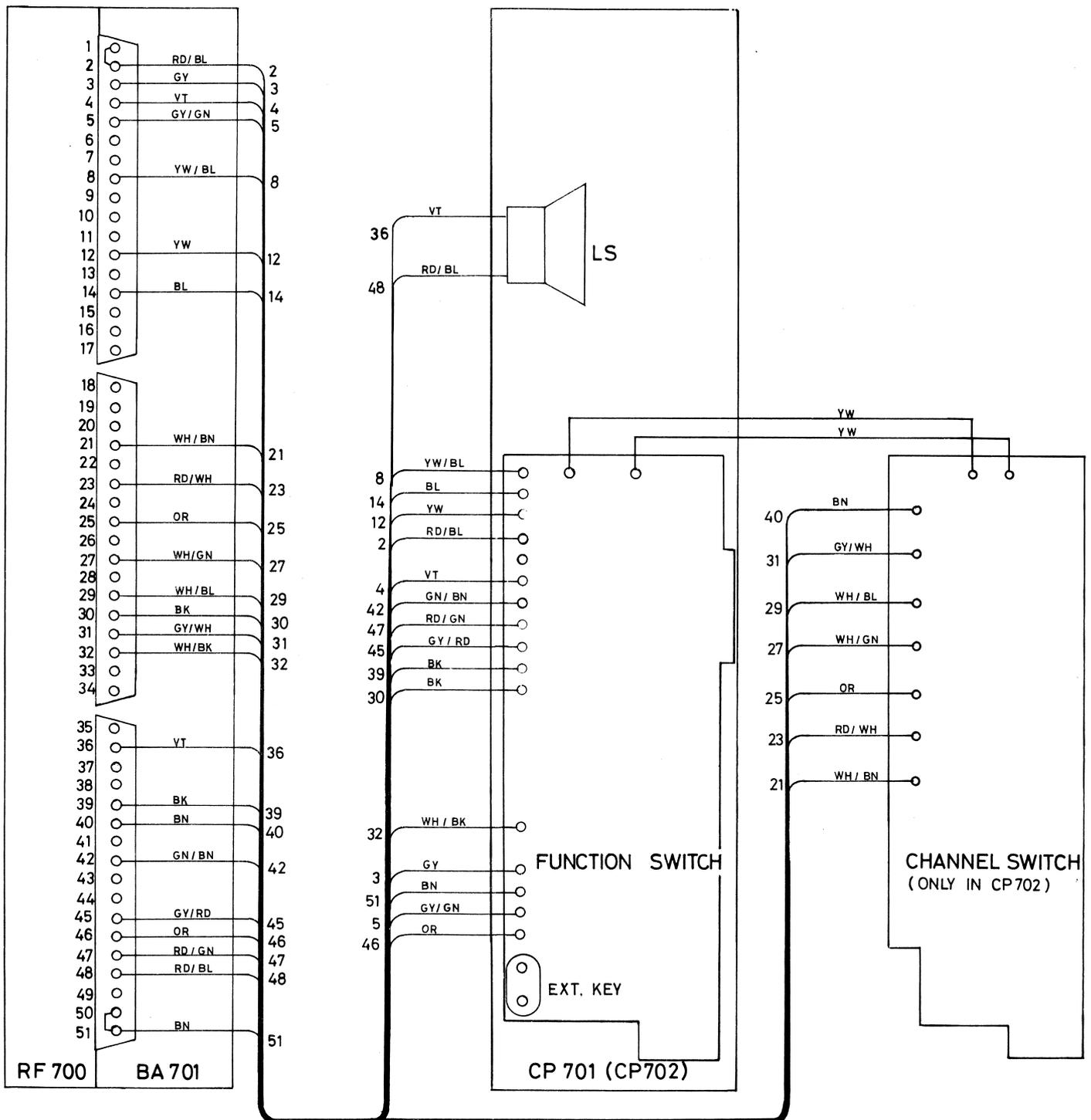
CP 701 OR CP 702



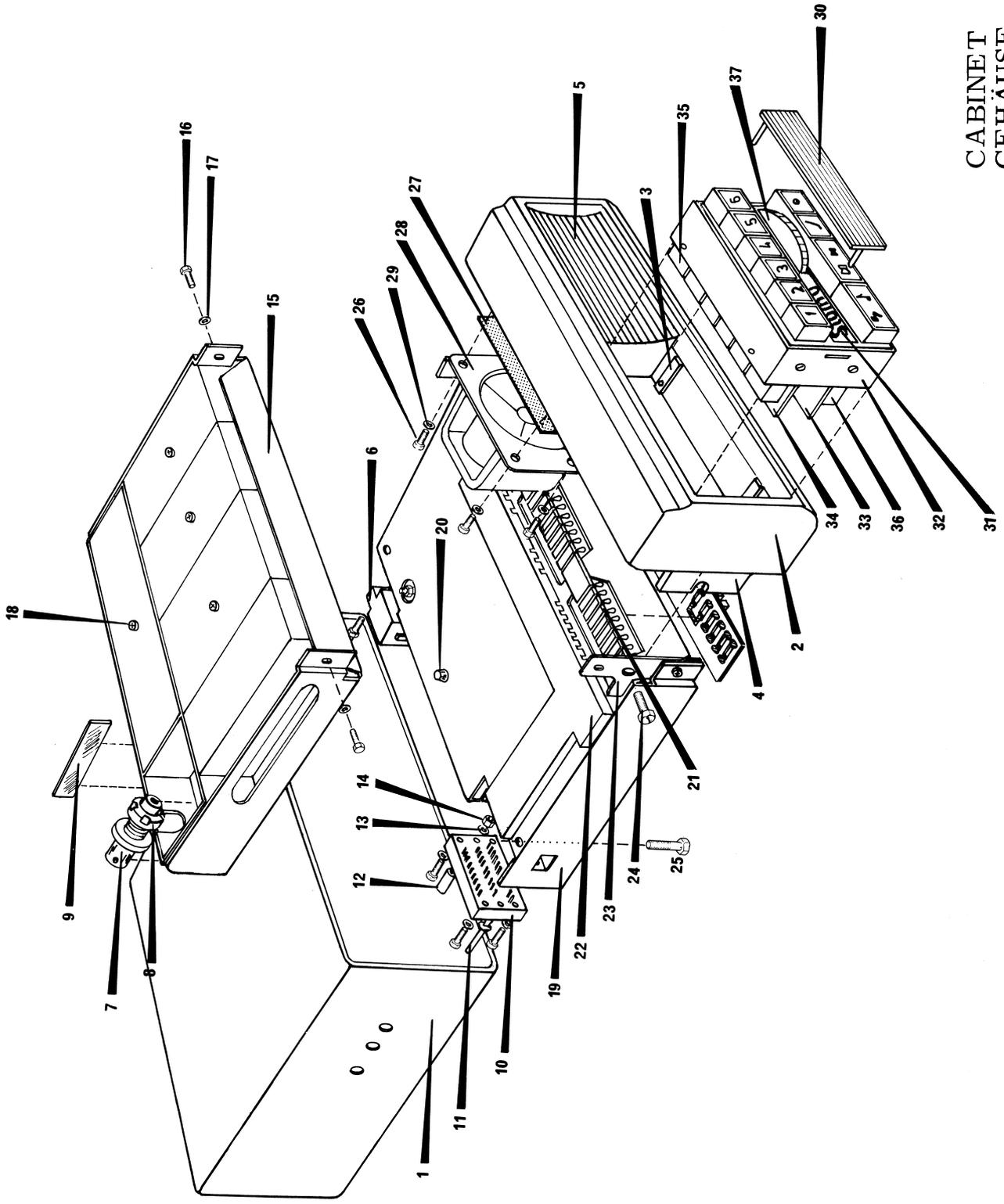
NOTE: CONNECTIONS IN CP 702.

FRONT PANEL CP 701, CP 702

D401.320



CABLING BETWEEN RADIO SECTION AND CONTROL PANEL.



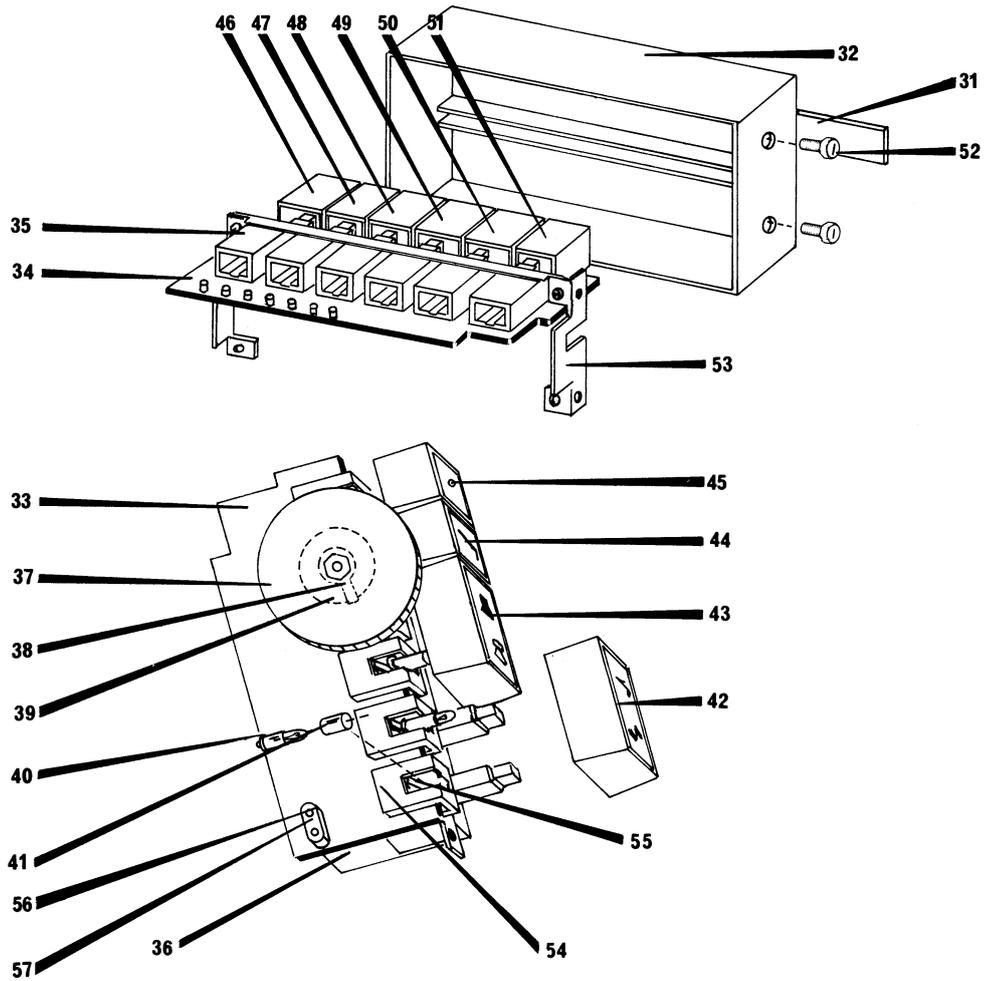
CABINET
GEHÄUSE

ITEM	CODE	DESCRIPTION
1.	10.2423	CA701 Cabinet with item 9 CA701 Kabinet med Pos 9
2.	15.0129	Frame: Front (rivetted to Pos. 4) Forramme monteret med pos. 4
3.	36.0222	Retaining spring: Push button Ass. Fjeder for CP701/CP702
4.	33.0370	Bracket: Front Panel Plade for sammenspænding
5.	52.0040	Grill: Loudspeaker Pynteplade for højttaler
6.	41.0184	Connector: 12V Konnektor for 12V
7.	41.0166	Connector: Antenna Konnektor for antenne
8.	29.0231	Nut.: Position 7 Møtrik for Pos. 7
9.	12.0164	Shield: Plexiglas Dækplade for type nr.
10.	41.5082	Connector: 34 PIN Konnektor: 34 pol
11.	31.0455	PIN: Guide Styretap for pos. 10
12.	31.0456	Bush: Guide Styrebøsning for 10
13.	2450-048027	Spring washer Fjederskive
14.	2205-026050	Nut Møtrik
15.	11.0852-01	Chassis Chassis for RF700
16.	20011-03006	Retaining screw Skrue for pos. 15
17.	2450-060032	Lock washer Spændskive
18.	20022-02004	Retaining screw Skrue
19.	11.0853	Chassis Chassis for BA700
20.	32.5048	Bumper: Black Rubber Afstandsstykke gummi
21.	54.0477	Terminal Board Tilslutningsliste
22.	12.0175	Guide: Cable Asembly (Grey plastic) Kablingsholder (grå plastik)
23.	37.0138	Hinge: Chassis Sammenspændingsbøjle

CABINET CA701
KABINET

ITEM	CODE	DESCRIPTION
24.	28.0096	Retaining screw: Hinge Skrue
25.	28.0095	Retaining screw: BA Skrue for BA-bund
26.	20.412-02207	Retaining screw: Loudspeaker Skrue for højttaler
27.	52.0041	Dust cover Beskyttelsesnet
28.	97.5032	Loudspeaker 5Ω 2 Watt Højttaler 5Ω 2 Watt
29.	2401-070028	Washer Skive
30.	51.0774	Front plate: Blank (only CP701) Pyntheplade (kun i CP701)
31.	51.0764	Label "STORNO" Skilt "STORNO"
32.	12.0153	Frame: Push button Ramme for betjeningspanel
33.	54.0585	Terminal Board: Push Button Ass. Lederplade for tast/tone
34.	54.0584	Terminal Board: Channel switch Lederplade for kanalomskifter
35.	47.0562	Switch ass.: Push button (Channel switch) Omskifterenhed: Kanalomskifter
36.	47.0561	Switch ass.: Push button (Tone-on/off) Omskifterenhed: Tast/tone
37.	12.0166	Knob: Volume Control Knap: Volumenkontrol
	10.2560	TB701 Terminal Board: Shorting Strap long Kortslutningsprint, lang (See note 1)
	10.2561	TB702 Terminal Board: Shorting Strap short Kortslutningsprint, kort (See note 2)
		<u>Note 1</u> If the radio equipment is not provided with tone/transmitter, a terminal board shorting strap TB701 should be mounted on the terminal board 54.0477.
		<u>Note 2</u> If the radio equipment is not provided with tone/receiver, a terminal board shorting strap TB702 should be mounted on the terminal board 54.0477.

CABINET
KABINET CA701



CONTROL PANEL
BEDIENUNGSFELD

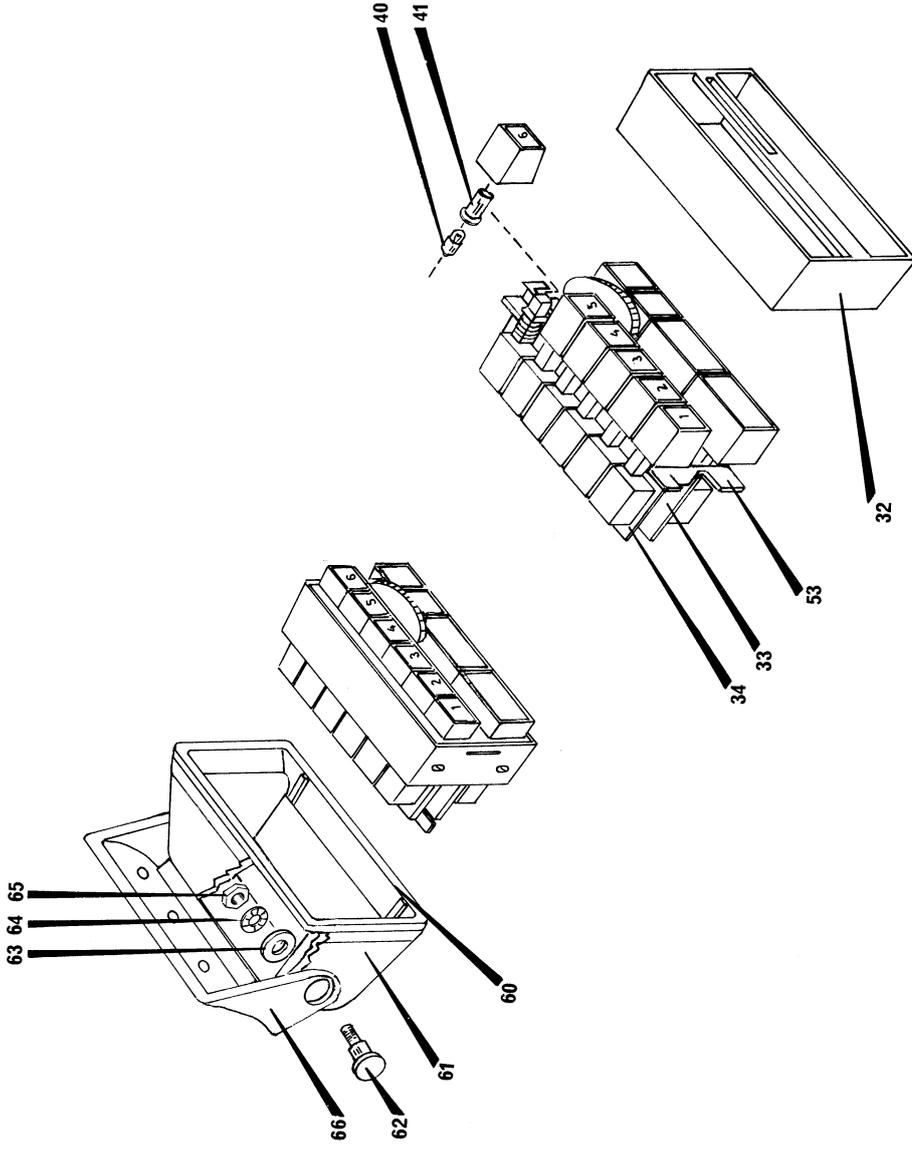
CP701, 702

ITEM	CODE	DESCRIPTION
	15.0050	Control Panel Complete (1 Channel). Betjeningspanel komplet (1 kanal)
	15.0057	Control Panel Complete (6 Channels) Betjeningspanel komplet (6 kanaler)
31	51.0764	Label "STORNO" Skilt "STORNO"
32	12.0153	Frame: Push Button Ramme for betjeningspanel
33	54.0584	Terminal Board: Push Button Ass. Lederplade for tast/tone
34	54.0585	Terminal Board: Channel Switch Lederplade for kanalomskifter
35	47.0562	Switch Ass: Push Button Ass. Channel Switch Omskifterenhed: Kanalomskifter
36	47.0561	Switch Ass: Push Button (Tone On/Off) Omskifterenhed for tast/tone
37	12.0166	Knob: Volume Control Knap for volumenkontrol
38	86.5069	Potentiometer 5K Log. Potentiometer 5K Log.
39	32.0393	Spring: Contact (Pos. 38) Fjeder for pos. 38
40	92.5098	Incandescent Lamp 12V 0.06A Lampe 12V 0,06A
41	31.0457	Bush (Pos. 40) Bøsning for pos. 40
42	49.0208	Knob: Tone Knap: Tast/tone
43	49.0207	Knob: Loudspeaker Knap: Højtaler
44	49.0214	Knob: Squelch Knap: Squelch
45	49.0211	Knob: On/Off Knap: Afbryder
46	49.0216	Knob: Channel 6 Knap: Kanal 6
47	49.0213	Knob: Channel 5 Knap: Kanal 5
48	49.0210	Knob: Channel 4 Knap: Kanal 4
49	49.0215	Knob: Channel 3 Knap: Kanal 3
50	49.0212	Knob: Channel 2 Knap: Kanal 2
51	49.0209	Knob: Channel 1 Knap: Kanal 1

CONTROL PANEL CP701
BETJENINGSPANEL

ITEM	CODE	DESCRIPTION
52	20011-02004	Screw Skrue
53	33.0376	Bracket Bøjle for sammenspænding
54	46.0010	Lamp Socket Lampeholder
55	46.0011	Lamp Contact Lampe kontakt
56	39.0019	Connector 2 Pin Kontaktholder
57	34.0062	Connector Pin Konnektor bøsning

CONTROL PANEL CP701
BETJENINGSPANEL



**CONTROL UNIT
BEDIENGERÄT**

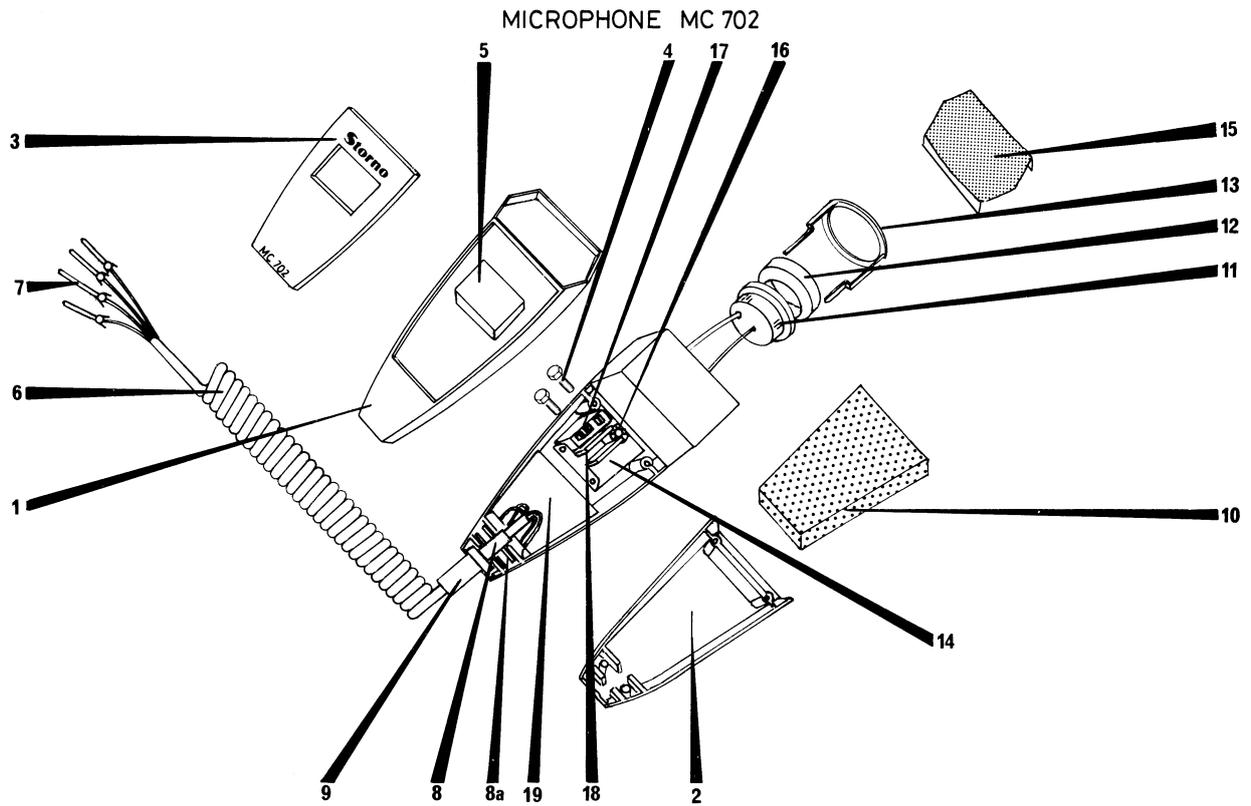
CB701, CB702

M405.037

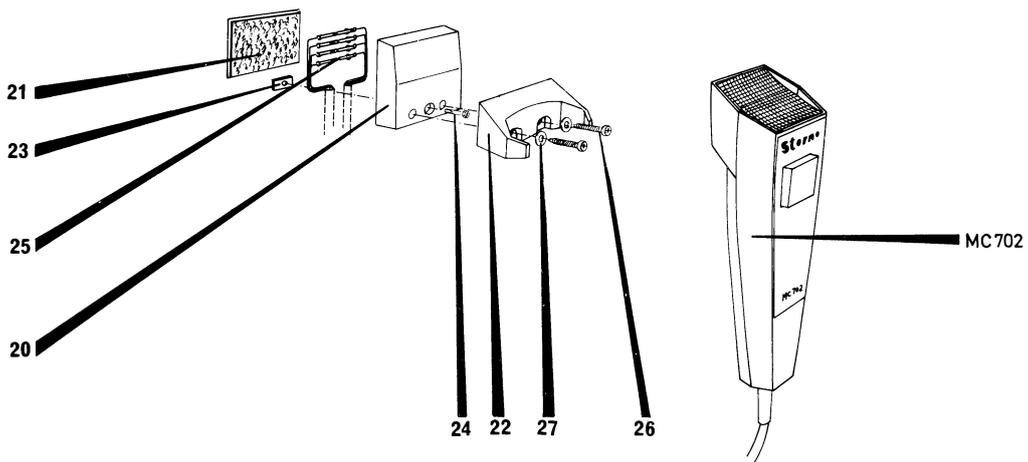
ITEM	CODE	DESCRIPTION
	10.2442	CB701 Control box 1 channel ass.
	10.2443	CB702 Control box 6 channel ass.
32	12.0153	Frame: Push button Ramme for betjeningspanel
33	15.0050	Push button ass. Tast/tone omskifter komplet
34	15.0057	Channel switch ass. Kanal omskifter komplet
40	92.5098	Lamp 12V 006A Lampe 12V 006A
41	31.0457	Lamp bush Lampe bøsning
60	12.0165	Chassis ass. Chassis kompl.
61	12.0155	Cabinet Kabinet
62	28.0098	Screw Skrue
63	2451-180062	Spring washer 18 x 6.2 x 0.6 Skive
64	2442-090051	Washer Skive
65	2207-050080	Nut Møtrik
66	12.0161	Mounting frame Ophæng for CB700
		For further information see mechanical parts list M405.031 for CP701
		For yderligere oplysninger se mekanisk styk- liste for CP701 M405.031

CONTROL UNIT
BETJENINGSENHED

CB 701 / CB702



JUNCTION BOX JB 701 AND MC 702



FIST MICROPHONE MC702, JUNCTION BOX JB701
HANDMIKROFON MC702, ANSLUSSKASTEN JB701

ITEM	CODE	DESCRIPTION
	96.0094	MC702 Microphone ass. MC702 Mikrofon kompl.
1	12.0174	Microphone housing Mikrofon hus
2	12.0172	Cover plate Bagstykke
3	51.0780	Front plate Forplade
4	20011-02010	Screw 2 x 10 Skrue
5	12.0171	Button Knap
6	18.0652	Spiral core Spiral snøre
7	41.5519	Pin contact 0,12 x 0,22 Kontakt ben
8	31.0307-10	Shrink tube Krymperør
8a	33.0361	Angle Vinkel
9	32.0383	Sleeve Gummitylle
10	32.0191	Foam packing Skumindlæg
11	96.5069	Microphone cartridge Mikrofon kapsel
12	32.0186-01	Rubberring Gummiring
13	37.0076	Spring for microphone unit Fjeder for mikrofon enhed
14	36.0202	Spring glip assembly Fjeder komplet
15	52.0043	Dust cover assembly Net for mikrofon komplet
16	2447-080030	Speed nuts 8 x 3 Låsering
17	47.5040	Microswitch Mikroswitch
18	33.0331-01	Bracket for item 14 Bøjle for pos 14
19	10.2548	AA702 Amplifier ass. AA702 Forstærker kompl.

FIST MICROPHONE
HÅNDMIKROFON

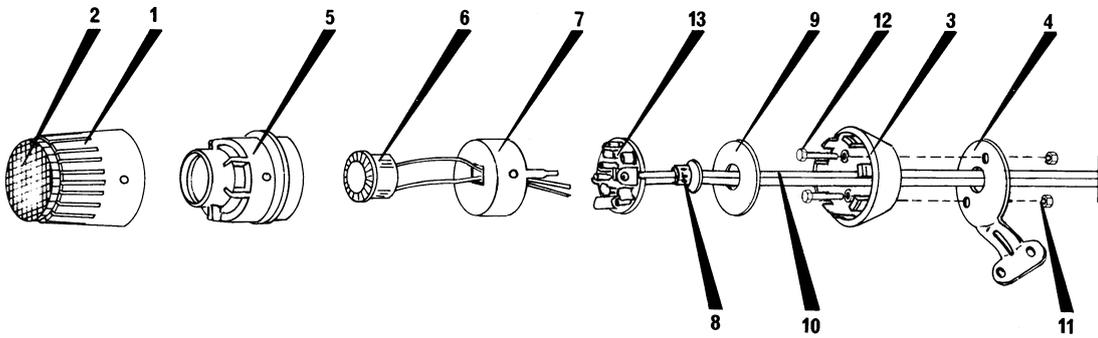
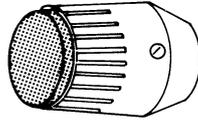
MC702

ITEM	CODE	DESCRIPTION
	10.2543	Junction box JB701 ass. Samleboks JB701 kompl.
20	12.0170	Housing black Hus sort
21	32.0377	Retaining plate: foam Skumplade
22	12.0173	Microphone retainer Mikrofon holder
23	38.0058	Cable clamp Kabelbøjle
24	20022-03008	Screw M 3 x 8 Skrue M 3 x 8
25	18.0646	Cable 2,50 m with pin and socket contact Kabel 2,50 m med stik monteret
26	20412-04225	Screw 4,2 x 25 Skrue 4,2 x 25
27	2450-080043	Washer Skiver

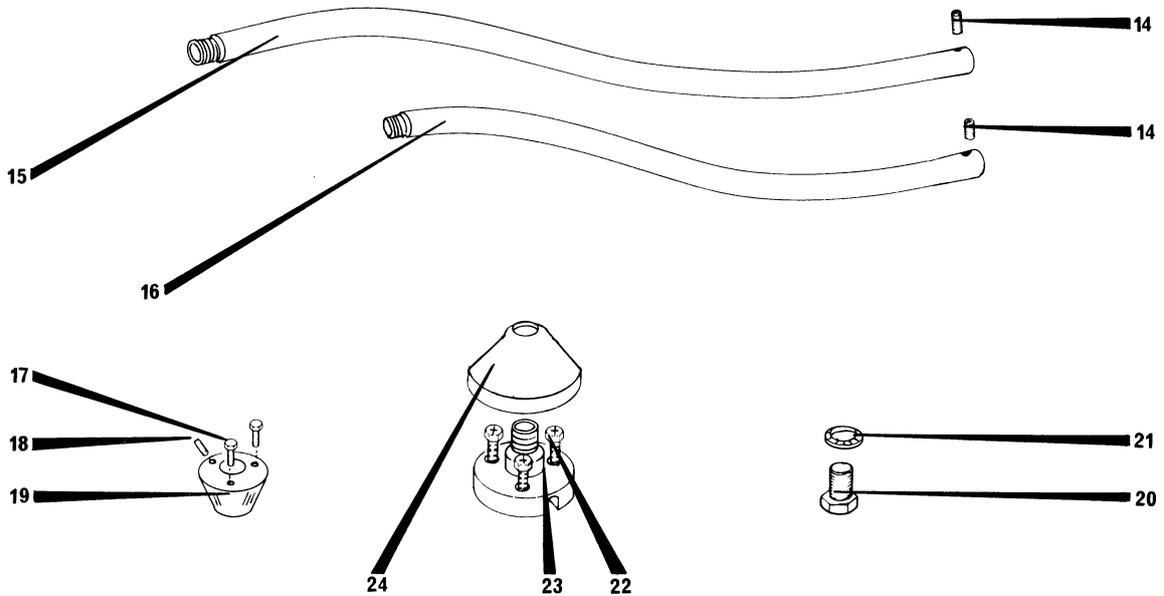
JUNCTION BOX ASS.
SAMLEBOKS KOMPL.

JB701

MICROPHONE MC701



MOUNTING KIT MK704



FIXED MICROPHONE MC701, MOUNTING KIT MK704
FEST MIKROFON MC702, EINBAU SATZ MK704

ITEM	CODE	DESCRIPTION
	15.0075	Microphone MC701 Mikrofon MC701
1	15.0062	Microphone housing with dust cover Mikrofon hus med beskyttelsesnet
2	52.0038	Dust cover Beskyttelsesnet
3	12.0148	Microphone housing, rear Mikrofonhus, bagstykke
4	11.0816	Plate Plade
5	12.0147	Rubber suspension Gummiholder
6	96.5079	Microphone cartridge Mikrofon kapsel
7	68.0103	Can Skærmdåse
8	30.5023	Rivet 4,8 x 0,4 x 4,6 Nitte 4,8 x 0,4 x 4,6
9	53.0532	Washer Skive for bund
10	18.0627	2,5 m wiring with pin contact 2,5 m ledning med kontaktben
11	2202-030055	Nut M3 x 5,5 Møtrik
12	20242-03006	Screw M3 x 6 Skrue M3 x 6
13	10.2488	AA701 amplifier AA701 forstærker

FIXED MICROPHONE ASS.
FAST MIKROFON KOMPL.

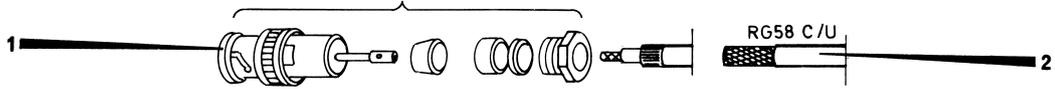
MC701

ITEM	CODE	DESCRIPTION
	10.2545	MK704 mounting kit / montage sæt
14	20193-03002	Screw Skrue
15	37.0140	Gooseneck 20 cm Svanehals 20 cm
16	37.0141	Gooseneck 35 cm Svanehals 35 cm
17	20242-03006	Screw Skrue
18	20063-03006	Screw Skrue
19	28.0099	Nipple for item 15 and 16 Nippel for pos 15 og 16
20	28.0065	Nipple for item 15 and 16 Nippel for pos 15 og 16
21	2441-180105	Washer Skive
22	20412-03913	Screw Skrue
23	28.0100	Nipple Nippel
24	32.0381	Cover Hætte

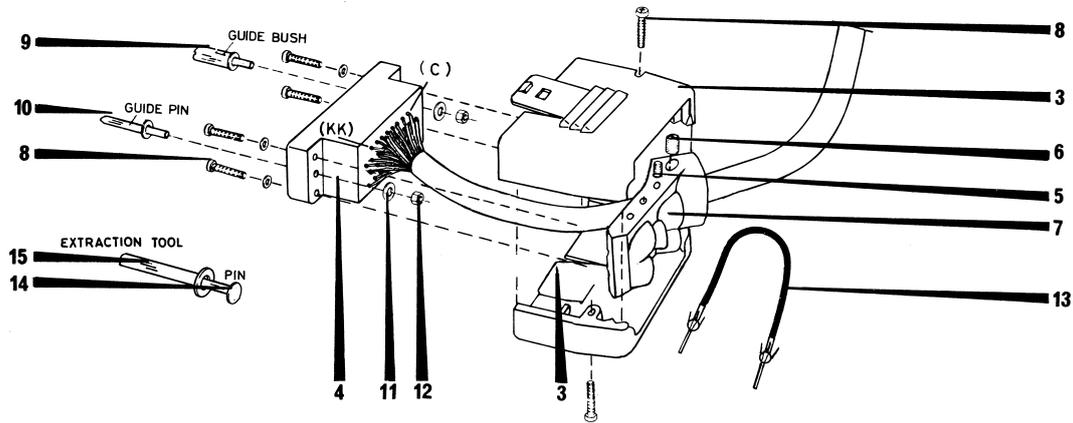
MOUNTING KIT
MONTAGESÆT

MK704

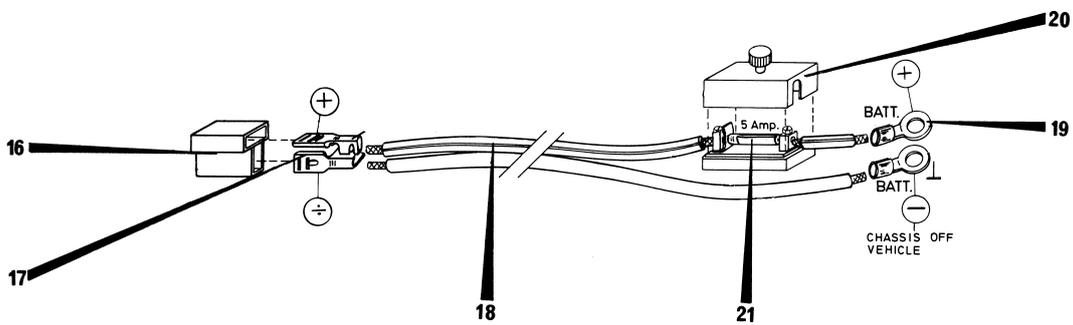
ANTENNA CONNECTOR 41.5120



CONNECTOR ASSEMBLY 41.0191



BATTERY CONNECTION



MOUNTING KIT
EINBAU SATZ

MK701

M405.032

ITEM	CODE	DESCRIPTION
1	41.5120	Antenna connector Antenne konnektor
2	175.5013	Coax cable Coaxkabel
	41.0191	Connector assembly Konnektor komplet
3	12.0152	Housing Hushalvdel
4	41.5523	Connector 34 pole Konnektor 34 pol
5	21141-04006	Nylon screw M 4 x 6 Nylon skrue M 4 x 6
6	21141-06006	Nylon screw M 6 x 6 Nylon skrue M 6 x 6
7	12.0151	Cablehanger Aflastning for kabel
8	20.412-02207	Screw 2,2 x 7 Skrue
9	31.0456	Guide bush Styrebøsning
10	31.0455	Guide pin Styretap
11	2450-048027	Washer 4,8 x 2,7 Skive 4,8 x 2,7
12	2202-026050	Nut 6 kt 2,6 x 5 Møtrik 2,6 x 5
13	18.0668	Shorting strap Kortslutningsledning
14	31.0470	Pin for extraction tool Tap for udtrækkerværktøj
15	30.0033	Extraction tool Udtrækkerværktøj
	32.0394	Rubber plug for item 7 Gummiprop for pos 7
		Battery connection Batteri tilslutning
16	41.5506	Housing for item 17 Holder for pos 17
17	41.5507	Socket contact Kontakt
18	173.5022	Battery cable Batteri kabel
19	35.5005	Cable eye Kabelsko

MOUNTING KIT
MONTAGESÆT

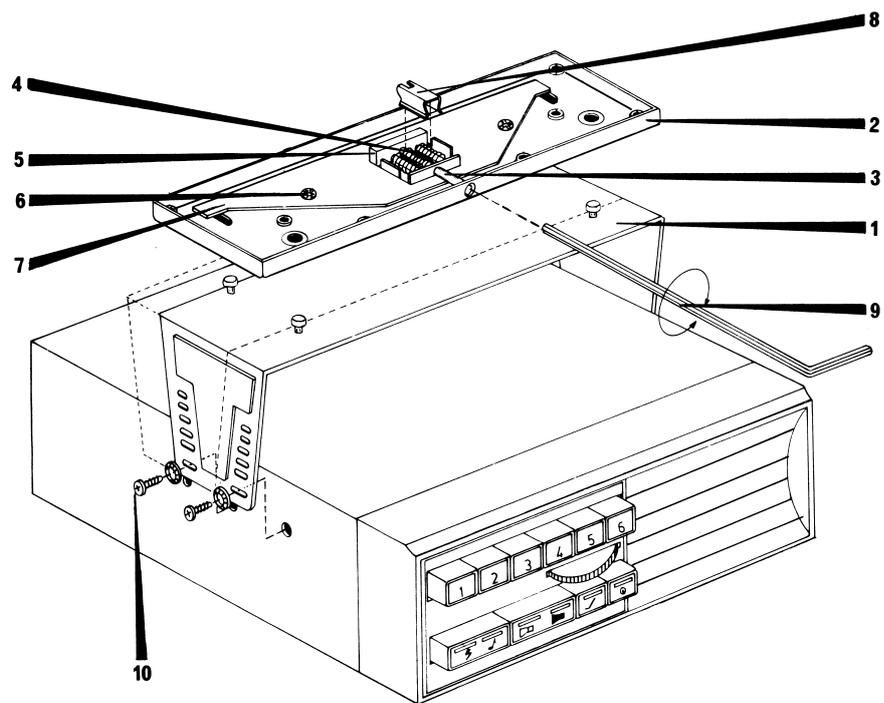
MK701

M405.032-2

ITEM	CODE	DESCRIPTION
20	46.5010	Fusebox Sikringsboks
21	92.5100	Fuse 5 amp. Sikring 5 amp.

MOUNTING KIT
MONTAGESÆT

MK701



MOUNTING FRAME
OPSPÆNDINGSBESLAG

MN701

M405.033

ITEM	CODE	DESCRIPTION
	10.2419	MN701. Mounting frame assembly Montagesæt komplet
1	37.0143	Mounting bracket Fastspændingsbeslag
2	11.0846	Mounting stand Montagebeslag
3	28.0101	Screw 5,5 cm Skrue 5,5 cm
4	11.0842	Guide pin: spring Holder for fjeder
5	36.0220	Spring for item 4 Fjeder for pos 4
6	2453-115030	Speed nut Låsering
7	11.0844	Lock plate: sheet metal Glideplade
8	36.0219	Retaining bar: spring Låsebøjle
9	17.5004-01	Unbrako tool Unbraconøgle
10	20242-04005	Screw 4 x 5 Skrue 4 x 5

MOUNTING FRAME ASS. CQM700
OPHÆNG KOMPLET CQM700

MN701