

CONTROL AND TEST UNIT

C35 + test UDstyv



U95B0363

CONTENTS

Description
Test Set-up
Schematic Diagram
Part List
Component Lay-out

Hjprøvningsforordning for C 35.

1. monter opstilling som vist i fig. 2. Forsyningsspænding + HV
2. kontrol af DCVM-omskifter. Lamperne for Supply, RX, RC, TX
 * Supply lyser kun hvis omskifter "key" er on.
 ADC og HF PROBE skal lyse efter omskifterens stilling
3. SQ OUT on og DCVM-omskifter i stilling RX. Sø-lampe skal lyse
4. RX GATE off lampen mærket RX gate skal lyse
5. TX GATE off lampen mærket TX gate skal lyse
6. KEY on de tre key-lamper skal lyse
7. TONE KEY on tone-lampen skal lyse
 efter check af test controls slås disse tilbage til udgangspositionen
8. BFO on kontrol af $21,4 \text{ MHz} \pm 20 \text{ Hz}$ samt variation af amplitude ca. 10 dB $U_{\text{max out}}$ ca. 300 mVpp belastet med 60Ω
9. ACVM-omskifter slås til venstre. kontrol af LINE OUT, LS/MICR. Line out-ls/micr lamperne skal lyse efter omskifterens stilling
10. ACVM-omskifter slås til højre. kontrol af DEVM, HF PROBE. De to devm-hf probe lamper skal parvis lyse efter omskifterens stilling

rettet SYSTEMAPPROVNING
 Dato: 23-4-79 GP

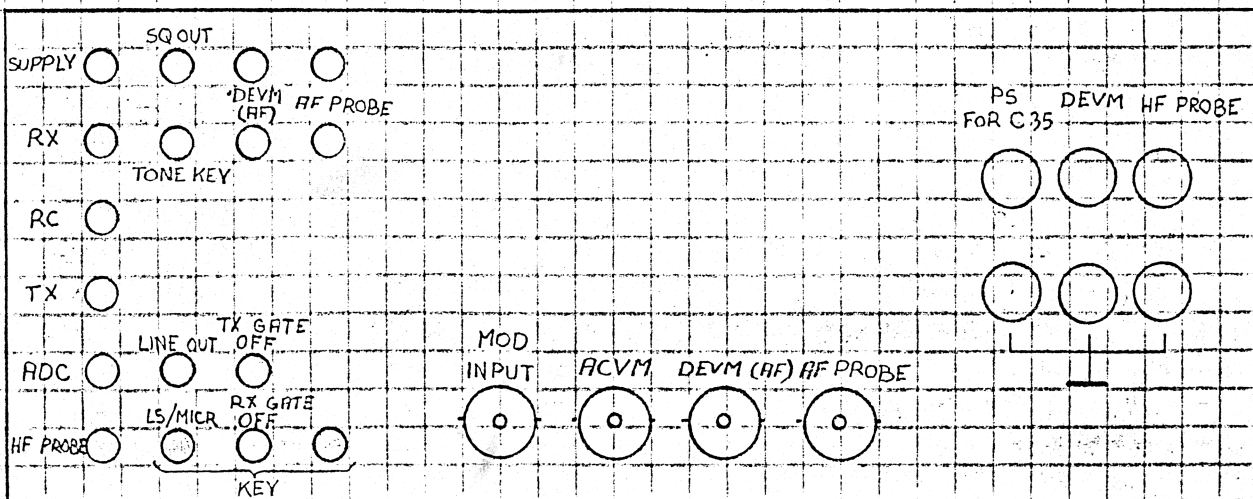


Fig. 1.

Opstilling for afprøvning af C 35

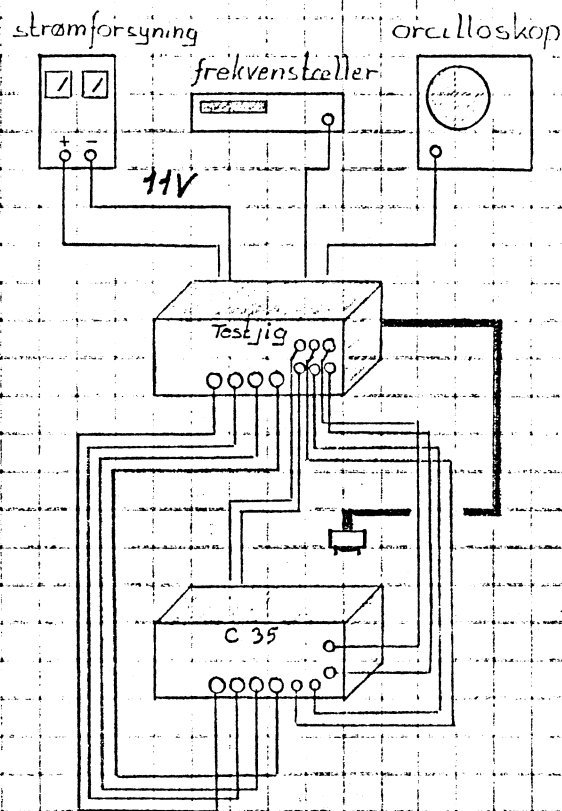
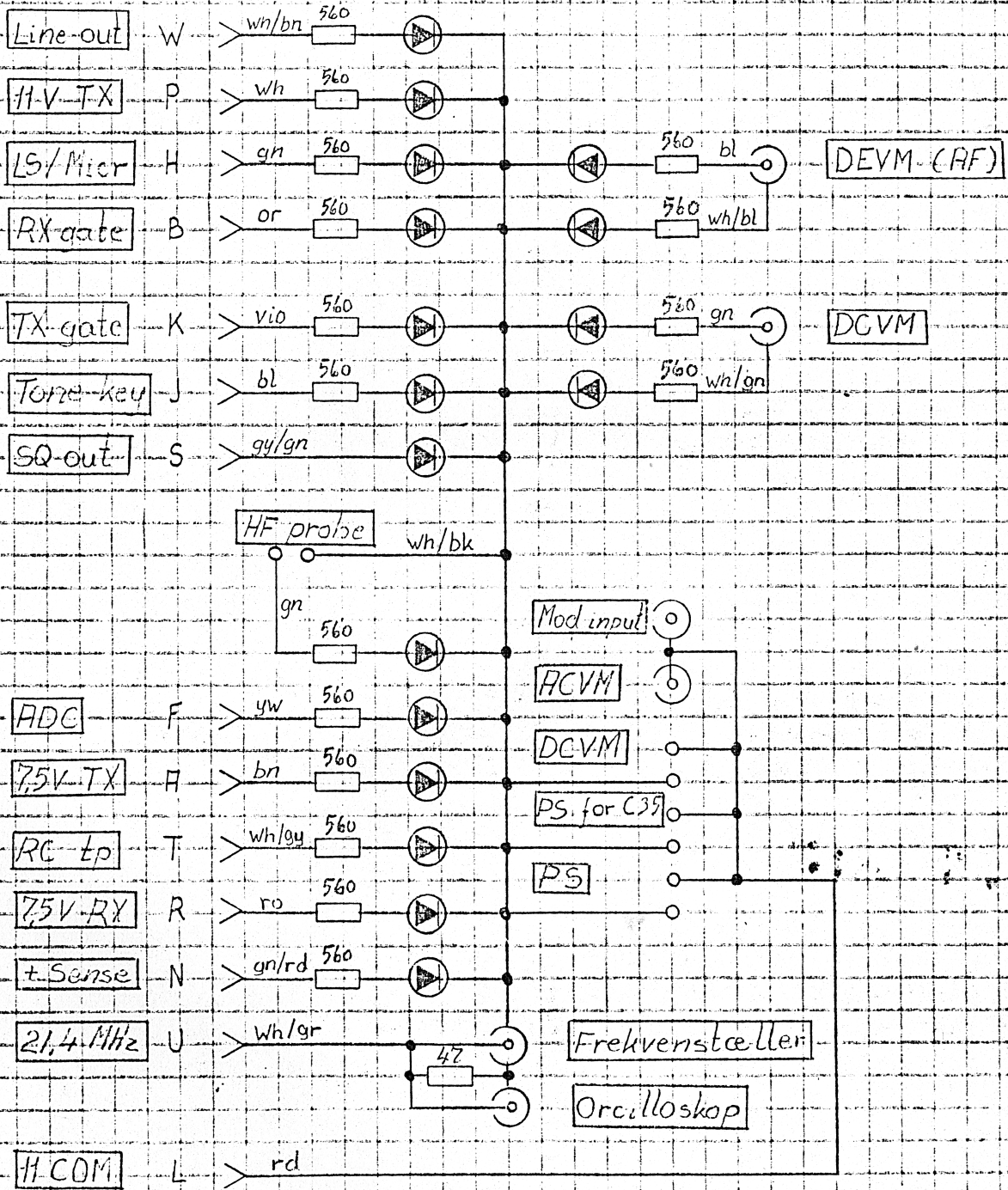


Fig 2.

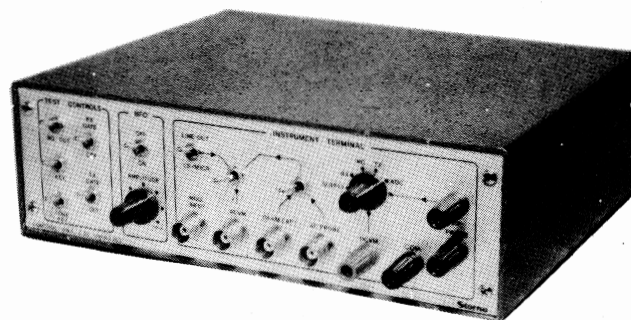
Diagram over test jig for C 35.



* samtlige dioder er LED.

STORNOPHONE 800

CONTROL AND TEST UNIT C35

Description.

The control unit C35, U95B0363, is an operating unit for the testing and repair of CQP800.

Connection to the test point and the battery terminals of CQP800 is established via the test cable 19B0027.

C35 contains switches for the control functions of CQP800, keying, tone keying, squelch, RX-gate and TX-gate.

On C35 is also instrument terminals for the external instruments to the desired test points.

To aid in the alignment of the receiver, C35 contains a BFO. This is a crystal controlled oscillator, which can be turned on and off by means of a switch.

The output level of the oscillator may be varied.

Data for the BFO:

Frequency: 21,400 MHz \pm 1 ppm
 Output: Max. 10 mW \pm 2 dB/50 Ω , as measured on terminal U in J1.
 Supply voltage: Nominally 11 V
 Current consumption: app. 8 mA
 Output variation: With P1: -10 dB from maximum output

Connections on the rear panel.

TEST PLUG	34-way connector for the test cable.
POWER SUPPLY	Jacks for power supply.
CURRENT MONITOR	Jacks for current monitor.

Connections on the front panel.

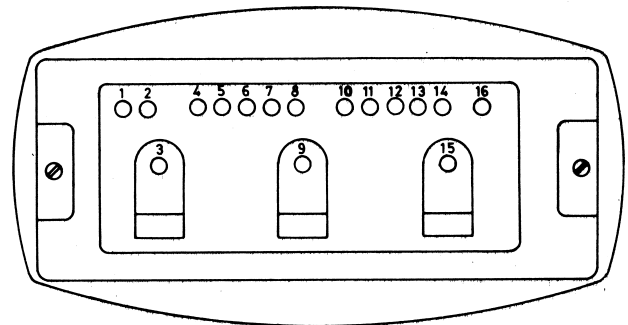
RF PROBE	Jacks for RF probe.
DCVM	Jacks for DC voltmeter.
AF PROBE	BNC connector for AF probe. Probe consists of shielded leads to be connected whenever measuring of audio is desired.
DEV M (AF)	BNC connector for the AF output of the deviation meter.
ACVM	BNC connector for AF voltmeter, distortion meter and oscilloscope.
MOD INPUT	BNC connector for AF generator.

SWITCH FUNCTIONS.

- O1. Toggle switch to cancel the squelch. With the switch down the squelch is off.
- O2. Keying switch. O2 keys the transmitter, switches off the 7,5 V RX-voltage, and connects the tone generator via J13 to the LS/MICR. terminal.
- O3. Toggle switch for tone keying. With the switch down the tone transmitter is keyed.
- O4. Toggle switch for the RX-gate. With O4 in position OFF, the 7,5 V RX-voltage is switched off.
- O5. Toggle switch for the TX-gate. With O5 in position OFF, the 7,5 V TX-voltage is switched off.
- O6. Toggle switch to turn the built-in BFO on and off. 21.4 MHz.
- P1. With P1 the output from the BFO may be varied app. 12 dB.
- O7. Toggle switch. O7 moves via O8, an AC-voltmeter (J12) to the receiver's 600 Ω line output and 30 Ω LS-output, respectively, or in position TX, to the modulation input J13.
- O8. Toggle switch. O8 moves an AC-voltmeter (J12) between line out/LS micr. (O7) and DVM/AF-probe (O9).
- O9. Toggle switch. O9 moves an AC-voltmeter (J12) to DEVM (J11) and to AF-probe (J11), respectively.
- O10. Rotary switch. O10 moves DCVM (J9) to one of the following DC-test points:
 - 1. Supply measures the battery voltage directly, terminal 9 on the test connector.
 - 2. RX, measures the 7,5 V RX-voltage at terminal 11 in the test connector.
 - 3. RC, measures at the RC-test in the receiver, terminal 13 in the test connector.
 - 4. TX, measures the 7,5 V TX-voltage at terminal 1 in the test connector.
 - 5. ADC, measures at the ADC-test point in the transmitter, terminal 4 in the test connector.
 - 6. RF-probe. Measures the voltage on terminal J6, where an RF-probe may be connected.

STORNOPHONE 800

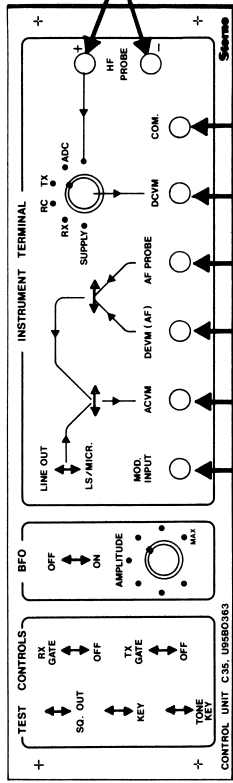
Test Point	Function
1	+ 7,5 V TX stabilized
2	+ 7,5 V RX regulator gate
3	DC ground (connected to point 15)
4	ADC voltage
5	Audio output-microphone input
6	Tone key
7	+ 7,5 V TX regulator gate
8	+ V _B Battery voltage measured after the fuse
9	+ 11 V Battery
10	+ 11 V TX
11	+ 7,5 V RX stabilized
12	Squelch disable
13	Receiver converter test point
14	21,4 MHz BFO signal input
15	DC ground (connected to point 3)
16	Discriminator and Receiver line output



BOTTOM VIEW

In addition to these instructions for use we refer to the test instructions for the type of CQP800 to be tested.

C 35
FRONT VIEW



RF PROBE
95.059

AF GENERATOR

Z = 600 Ω

DISTORTION METER

AC VOLT METER

OSCILLOSCOPE

DC VOLT METER

AF PROBE

m A METER

POWER SUPPLY

DEVIATION METER

Z = 50 Ω

CQP 800

ADAPTOR
41.0206

ADAPTOR
41.0201

ATT.

Z = 50 Ω

SIGNAL GENERATOR

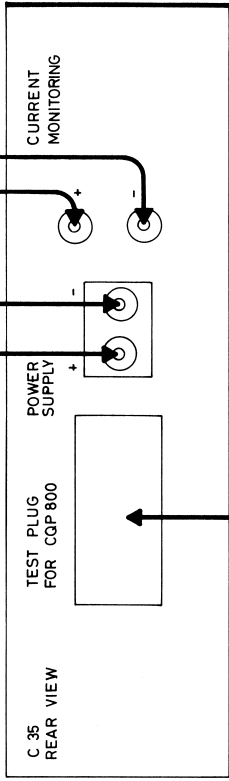
Z = 50 Ω

FREQUENCY COUNTER

Z = 50 Ω

WATT METER

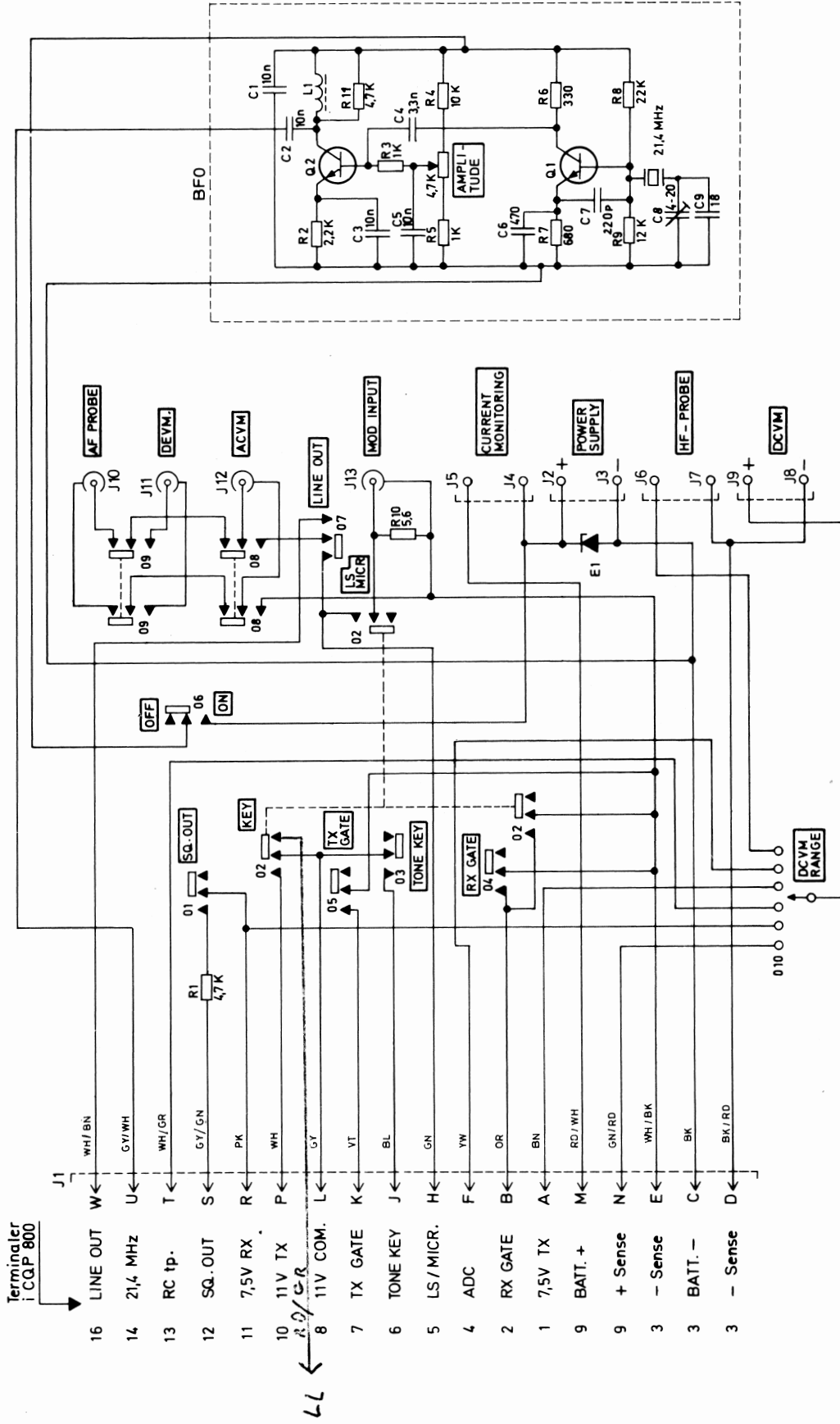
Z = 50 Ω



TEST CABLE
19B 0027

STORNOPHONE 800 TEST SET-UP

D402. 093



CONTROL UNIT C35

D402.165

Storno

TYPE	NO.	CODE	DATA
		95B0363	Control Unit C35
C1		76.5070	10 nF 10% polyester FL
C2		76.5070	10 nF 10% "
C3		76.5070	10 nF 10% "
C4		76.5070	10 nF 10% "
C5		76.5070	10 nF 10% "
C6		76.5106	470 pF 2.5% polystyr TB
C7		76.5104	220 pF 2.5% "
C8		78.5026	4.5 pF - 20 pF trimmer
C9		74.5142	18 pF ± 0.5 pF ceram TB
R1		80.5257	4.7KΩ
R2		80.5253	2.2KΩ
R3		80.5249	1KΩ
R4		80.5249	1KΩ
R5		80.5249	1KΩ
R6		80.5243	330 Ω
R7		80.5247	680 Ω
R8		80.5265	22KΩ
R9		80.5262	12KΩ
R10		80.5222	5.6 Ω
R11		80.5257	4.7KΩ
R12		86B5050	4.7KΩ
L1		63.5007	15μH RF choke
X1			21.400MHz Crystal 98-8
Q1		99.5168	BF167 Transistor
Q2		99.5166	BF173 Transistor
J2		40B5015	Jack, red
J3		40B5014	Jack, black
J4		40B5015	Jack, red
J5		40B5014	Jack, black
J6		40B5013	Jack, grey
J7		40B5013	Jack, grey
J8		40B5014	Jack, black
J9		40B5015	Jack, red
J10		41B5063	BNC connector
J11		41B5063	BNC connector
J12		41B5063	BNC connector
J13		41B5063	BNC connector

Storno

TYPE	NO.	CODE	DATA
	O1	47B5028	Toggle switch
	O2	47B5048	"
	O3	47B5028	"
	O4	47B5028	"
	O5	47B5028	"
	O6	47B5028	"
	O7	47B5028	"
	O8	47B5043	"
	O9	47B5043	"
	O10	47.5074	Selector: 10-position

CONTROL UNIT C35

X402.158

