ortofon

Test STL 732

1. Without main circuit

Mains voltage ok. ± 15 vdc
Light in "Mains" buttom

2. With main circuit

The strap stays are connected to A = 0 dB in/out

2. A. Ramp generator

a. Scope on M5: Saw tooth
Start potential: - 4.5 → - 5V, controlled by Z21.
Normally Uz = 5 → 6V.

b, Pulse frequency: 80 kHz ~ 12.5 uSec. to be adjusted by R 203a. Normally 180 → 270 K.
It should be possible to increase it to 100 kHz ~ 10 µSec without stopping the UJT (Q22)

c. Peak potential: + 5V, to be adjusted with C203a.
Normally 330 pF.

2. B. Control amplifiers

a. - 10 dBm 20 kHz is supplied to parallel connected control inputs. Threshold: pos. 10.

b. Measuring point M_1 channel A, channel B respectively.
Frequency response: 20 kHz and downwards

20 kHz	+ 11.5 dBv ± 1 dB
7 kHz	+ 13 dBv + 2 - 0 dB
1.9 - 2 kHz	0 dBv
1260 ± 30 Hz	- 10 dBv
835 ± 15 Hz	- 20 dBv

c. Both M_1 should be able to track down to 1.4 kHz better than 1 dB.

2. C. AC-DC converter

a. DC-meters are connected to each H5 output
Threshold: pos 10

b. On H5 output is adjusted to 0V with P1, measured with DVM (digital volt meter) for control input supplied 250 mV 4 kHz.

c. Variation of control voltage of ± 150 mV AC should result in DC variation on H5 output: ± 5V → ± 5.5V

ortofon

2. D. Pulse-width modulator

a. Control voltage; A//B: 250 mV 4 kHz
On the f_o meter you can see that the modulator works.

b. Scope is connected to the modulator output:
(Collector Q4 and Q5 + anode D8 + R63).
Here should be seen a symmetric pulse as regards time.

c. Control voltage is varied and the pulse-width should move accordingly. Whole pulses should be obtainable down to 0.5 uSec. Pulses should stop at + or - 150 V control voltage.

3. Main filters

a.
Threshold: pos. 0.

b. Outputs are loaded with 560

c. Check that the relay connects through correctly, when net is switched off.
A = 0 dB. Switch on again.

d. Check the DC balance in points M_1, M_2, and on the output stage: (R73/78/79/80) max. 50 mV DC.

e. There should now be passage for 1 kHz 0 dBm without appreciable change in level.
Tolerance for changes in level: $\pm$ 0.1 dB
Tolerance for level differences: 0.10 dB
to be adjusted with R73a. Normally 390 - 470 K.
The level will depend on generator- and load impedance.

f. Check unclipped signal out at:

+ 18 dB_v 1 kHz in.

g. Frequency response: Max input signal + 10 dBm.
Lower limit: better than - 1.5 dB at 20 Hz
Upper limit: better than - 3 dB at 20 kHz
0 dB at 1 kHz.

3.A. Limiting characteristics

a. Control voltage from separate generator 4 kHz
Threshold: pos. 10.

b. By complete overdriving of the control amplifiers (meters completely pressed home) the 3 dB point should be 470 Hz $\pm$ 15 Hz, 0 dB at 70 Hz.

c. Max. channel matching: 0.5 dB

d. The reading of the meter is now adjusted.
Signal generator is set on 7 kHz, control generator (7 KHz) up till the output signal has gone down by 3 dB. Meter should now read: f_o = 7 KHz. To be adjusted with R36a. Normally 50 to 70 kohm. Without control voltage the meters should read 20 kHz. To be adjusted with R37a. Normally 330 to 470 kohm.
R 36a and R37a should be adjusted in parallel.

3. B. Signal generator to input A or B

a. Outputs is connected to the respective control input. Measuring device on output incl. 560 ohm.

b. Threshold pos. 10

c. The signal generator level at 12 kHz is raised to Uo = 0.25 V-AC. Signal level is raised further 18 dB and Uo must not rise over 0.3 V-AC.

d. The output level should be increased 0.8 - 1.5 dB per threshold step downwards.

4, Attack and Release times

a. Coupling as before. Threshold pos. 10

b. Scope on output of H5.

c. input signal level-switch is used. The hight signal is set to + 3V on H5.
The low signal is set to - 4.25 on output from H5.
Both are set with DVM.
The voltage gradiant from - 4.25 to + 3V is seen on the screen.
By way of the 4-amplifier it is adjusted so that the voltage jump is 8 cm. Release on 100 mSec.

d. Attack time is from start to 60% of the end value.
The 6 positions are checked like this. The times observed should be within $\pm$ 10%.

3. Release time. As before. Trigger polarity is inverted.
The time is from start to 40% of the start value.

ortofon danmark	Emne: Afprøvningsudstyr til STL 732	
Udarb. af: FN/HSP		Blad: af
Dato: 16.10.1981	Til:	c.c.

Afprøvningsvejledningen til STL 732 forudsætter at følgende udstyr er tilgængeligt.

Tonegenerator (10Hz - 40 kHz)
Tonegenerator (ca. 4 kHz ca. 10 V output med attenuator)
Frekvenstæller (10 - 40k Hz)
Voltmeter (følsomhed 1 mV-AC)
Voltmeter (følsomhed 1 mV-AC)
DC-voltmeter (Digital Volt Meter)
Oscilloskop med to kanaler (evt. med storage)
Dekademodstand (x 10 ohm - x 10 kohm)
Dekademodstand (x 100 ohm - x 100 kohm)
Dekadekapacitet (x 100 pF - x 100 nF)
Omskifterbox (skifter med relæ fra input til lavere output. Det lavere output fås fra indbygget potentiometer. Omskifterfrekvensen kan skiftes mellem ca. 3 Hz og 1 Hz.)
Kabler:
A 2 stk. XLR til line input
B 2 stk. XLR til control input
C 2 stk. XLR til output (med ca. 600 ohm belastning)
C kan laves som et specialkabel, der har indbygget 600 ohm belastning og 2 forgreninger. En forgrening til control input og én forgrening til måleinstrument.
Har måleinstrumenterne og generatorerne ikke balanceret udgang, kan det være fordelagtigt med et XLR mellemstik til konvertering fra USA til EUR standard (ben 2 og 3 er krydset).

FN

ortofon

Test equipment for STL 732

It is a condition for the test instruction for STL 732 that the following equipment is available.

Tone generator (10Hz - 40 kHz)
Tone generator (approx. 4 kHz, approx. 10 V output with attenuator)
Frequency counter (10 - 40k Hz)
Volt meter (sensitivity 1 mV - AC)
Volt meter (sensitivity 1 mV - AC)
DC-Volt meter (Digital Volt Meter)
Oscilloscope with two channels (maybe with storage)
Decade resistor (x 10 ohm - 10 kohm)
Decade resistor (x 100 ohm - 100 kohm)
Decade capacitance (x 100 pF - x 100 nF)
Switch box (switches with a relay from input to lower output. The lower output is obtained from a build-in potentiometer. The switch frequency can be changed between approx. 3 Hz and 1 Hz).

Cables:
A. 2 pcs. XLR to line input
B. 2 pcs. XLR to control input
C. 2 pcs. XLR to output (with approx. 600 ohm load)
   C can be made as a special cable with build-in 600 ohm load and two derivations. One derivation for control input and one to the measuring device.

If the measuring devices and the generators are not supplied with balanced output, it can be advantageous with a XLR intermediate plug for conversion from USA to EUR standard (pin 2 and 3 are crossed).

FN/HSP
16.10.81