INSTRUCTION MANUAL STL841.

GENERAL

The Regulated Filter STL841 is intended for the insertion in a two channel frequency transmission line, in which a limitation of the levels especially in the treble region is desired. The outputs of the filter may be connected directly to the control inputs according to the position of the "Threshold" selector on the frontpanel the filter will react upon high signal level by shifting its cut off frequency downwards just so far that level is atten-nuated to the desired maximum value.

Primarily the unit constructed for use in disc cutting systems, in which it essential that high peaks in the treble region are limited since such peaks may cause distortion when the record is played back, or even be impos-sible to cut because of the physical dimensions of the cutting stylus in relation to the groove speed. Peaks of longer duration may also overload the cutterhead an either cause a drop out a thermal protection device or damage the cutterhead.

In a cutting device,the filter should be controlled by a voltage, represen-ting the cutter current.
Such a voltage is available from Ortofon cutting amplifiers.

The unit may also prove to be a valuable aid in other kinds of sound systems, e.g. tape mastering, FM broadcast, sound film, ect.
The range of threshold levels selectable from the frontpanel may be shifted by an internal potentiometer or by inserting an attennuator before the control input.

ATTACK AND RELEASE TIMES

The filters will react on the control signal level according to the "Attack Time" chosen on a front panel selector.
The range is 0.3 ms to 100 ms in 6 discrete steps,separated by a factor about 3.Similarly the recovery time or
"Release Time" may be selected within a range from 3 ms to 1000 ms.

The attack and release times will be defined in technical section. Roughly, however, they may be regarded as the times required to shift the cut off frequency one octave downwards and upwards respectively when a sudden change in the input level occurs.

By ussing the threshold selector as well as the two time selectors, it is possible to obtain the optimal performance of the filter considering the musical requirements as well as the technical restrictions.

Two meters on the frontpanel indicate of the filter during operation.

UNPACKING OF THE UNIT

The instrument is ready for operation immediately after unpacking. However, a visual inspection of the front and rear plates is advisable.If an inspection of the internal circuitry is desired, the top panel may easily be removed by inscrewing the "unbraco" edge screws.

ISTALLATION AND GENERAL INFORMATION.

The Regulated Filter STL841 is constructed for mounting in 19" racks.
The terminals: input, output and control are XLR sockets.
Since the European and the American standards for the wiring of XLR are different, a label is attached to the unit indicating the actual connection. (See drawing no. 6926).

Also is should be checked that the unit is connected for the correct mains voltage (220-230 V or 110-115).

OPERATION

When the unit is properly wired, mains may be switched on.Note that the two meters indicating the cut off frequencies indicate 20 kHz, i.ei almost full scale deflection.

In a cutting systems, the function may be checked by turning up fully the threshold selector and sending a low level 12 kHz tonesignal through the system to the cutterhead or to a dummy load.
Both time selectors should be turned to minimum times.
Observe the cutter current meters on the cutting amplifiers while increasing the level of the signal.
The current will increase proportionally only to a small value and then remain almost constant. at the same time the meters on the STL front-panel will indicate a continuously decreasing cut off frequency.
Now turn down the threshold selector until the desied maximum current is observed on the cutter current meters (0.8 - 1.0 A).

In this position of the selector the unit will protection against thermal overload of the cutting head in case of a continuous signal.
When music is transferred to the cutting head a lower threshold position may be chosen. It remains a question of judgement, at which position it is defensible to cut a given titel at a certain level.
The cut off frequency meters have their scale red painted from about 7 kHz and down, because the action of the filter starts to turn audible if the limitation is driven too far. The filter itself will not change in its performance until the pointer is down 1 kHz, which is the limit of the regulation. Consequently it is advisable to observe that the pointers do not enter the red painted area and it becomes important to observe that it never reaches the "bottom", i.e. below 2 kHz.

If the limiter is operated in a self-controlling mode and the limiting range determied by the threshold potentiometer is found to be below desired renge, the control input signal may be attennuated through a simple external potentiometer.