



# F760X-RS Compressor-Limiter-Expander

**\*\*\*Verify proper mains voltage setting on fuse drawer of power inlet before applying power. If you are unsure how to do this, contact your dealer or Q2 Audio directly at: [info@q2audio.com](mailto:info@q2audio.com)\*\*\***

## Operation Procedure: Quick Start

This is the ADR recommended set-up procedure to get the audio levels set up properly.

- a). Verify that the EXPANDER section is switched 'OFF'; COMPRESSOR 'RATIO' switched to 1:1 (non-operative); the PEAK LIMIT switched 'ON' (or 'PRE.EMPH' if your application will require de-essing); and the channel OUTPUT control turned down. When operating in stereo, it is recommended that the stereo controls be set to approximately the 3:00 position otherwise they can be left fully clockwise. This is to allow some up/down stereo level adjustment if required at a later time.
- b). With the SYSTEM bypass switch to 'OUT' (i.e. by-passing the F760 vari-loss amp section) the audio levels to/from the F760 should be established in the usual way as though the F760 were not in the signal path. The audio level should be peaking to at least -10dBm, but preferably to 0dBm in order to obtain maximum compression possibilities.
- c). Having established the normal level, switch the F760 SYSTEM bypass to 'IN' and adjust the channel INPUT control until the overall amount of gain reduction likely to be required is indicating on the meter (example: 8dB). At this stage the Peak Limit section is working and red indicator will be flashing.
- d). Turn up the channel OUTPUT attenuator and adjust so that the level is peaking to the same level as the direct signal. This is best done under dynamic signal conditions rather than on tone if monitoring with VU meters. A relevant direct comparison is now available between direct and compressed signal at the flick of the SYSTEM 'IN' / 'OUT' switch at closely approximating peak levels.
- e). With the COMPRESSOR 'RATIO' control select the ratio required (e.g. 2:1) and adjust the COMPRESSOR 'THRESHOLD' control until the red LIMIT LED only indicates on peaks above the amount of compression required (move the threshold down from '0' towards the -20 point until the red LIMIT LED goes out, then come back one position. The PEAK LIMIT section will then operate on any further unexpected increase in level. The amount of compression may be changed by increasing/decreasing the channel INPUT control and adjusting the compressor threshold to adjust the relationship between compression and peak limiting. Once set-up it will not be necessary to alter the channel OUTPUT level (as per step 'd').

f). The 'RELEASE' time in the compressor section will be adjusted for effect as well as the 'ATTACK' time.

g). In adjusting the compressor section always reference it to the PEAK LIMIT even if the PEAK LIMIT is then switched out during operation. This maintains the optimum signal-noise level in the system. When using the tighter slopes in the compressor the threshold will lie just under the PEAK LIMIT in position -2 to -8 (20:1 to 3:1 ratios).

h). The compression slopes are calculated on a 15dB range of gain reduction. (i.e. the 2:1 ratio is established in the set-up procedure as 30:15). It will be found in practice that the initial ratio in that position is more akin to 1:1.5 becoming slightly tighter as gain reduction increases. Thus, if only 6dB of compression were required this will be softer than the ratio indicated and the next position higher could be selected. In practice this will not be found of great importance but it is useful to know of.

#### **Side-Chain Access:**

To allow 'Vocal Stressor' or 'ducking' type effects , the input to the compressor side-chains may be accessed via the 1/4" TRS jacks on the rear panel. A 1/4" TRS cable will need to be made or purchased with your preferred terminations on the send and return, this could be XLR, TR/TRS, etc., depending on your connection needs. The send and return are unbalanced. The side chain send must not see a lower impedance than 10K ohms (minimum load of 10K ohms).

The pinout of the TRS jack is:

TIP: SEND

RING: RETURN

SLEEVE: GROUND

Note: prior to serial number 85, TIP and RING functions were reversed.