

FALCON



OPERATOR'S MANUAL

Version 1.0
20160917



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THE CONTROLS

ATTACK SWITCH: A three position switch with fast, medium and slow settings, which controls the time it takes Falcon to respond to the input signal. Fast is the top position

RELEASE SWITCH: This switch controls the time it takes Falcon to return to no gain reduction. It is a three position switch with fast, medium and slow settings. Fast is the top position. The release time is also determined by the program material. This is the optical time constant effect. Sometimes called auto release or program dependent release.

METER SWITCH: Allows monitoring the output level or gain reduction.

LIMIT-COMPRESS: This switch changes the knee shape from a soft knee to a hard knee for limiter operation

COLOR SWITCH: In the top or the “100” position the tube circuit is operated with no negative feedback for an extremely rich sound, In the lower position the tube has negative feedback. This gives the user color choices. The negative feedback position will be a cleaner, more accurate sound where as the 100 position is more color.

WET-DRY: This is the mix between the original signal and the processed audio. When in link mode the WET-DRY controls operate independently.

BYPASS SWITCH: This is a three position switch. In the bypass position, (the bottom position), Falcon is removed from the audio path.

In the IN position (The middle position) Falcon is switched into the audio path.

In the LINK (or top) position, the link signals are connected between the channels. The link cable is a special cable, (supplied by Crane Song). This allows master slave operation and does not use the 500 series rack interconnect. The LINK light will be brighter on the master unit, dimmer on the slave unit and off when there are no linked channels.

All units must be in the bypass mode for the link to be engaged. If any units are switch to IN or LINK, LINK will be disallowed. This mode of operation allows the LINK switch on the master unit to put all channels into bypass with one switch

To set the LINK mode, set all channels to BYPASS, set the switch on the desired master channel to link. The LEDs will show the status of linking

In link mode: ATTACK, RELEASE, METER SWITCH, COLOR SWITCH, and THRESHOLD controls are controlled on the master channel

THRESHOLD

The threshold control governs the amount of gain reduction.

GAIN: The gain control will adjust the compressor gain from off to +15 dB of gain. When linked the gain controls operate independently.



ATTACK an RELEASE
have 3 positions

Meter switch

compressor-limiter mode

system color

Link
In
Bypass

Bright LED indicates the MASTER

Dim LED indicates the SLAVE



This channel is the MASTER

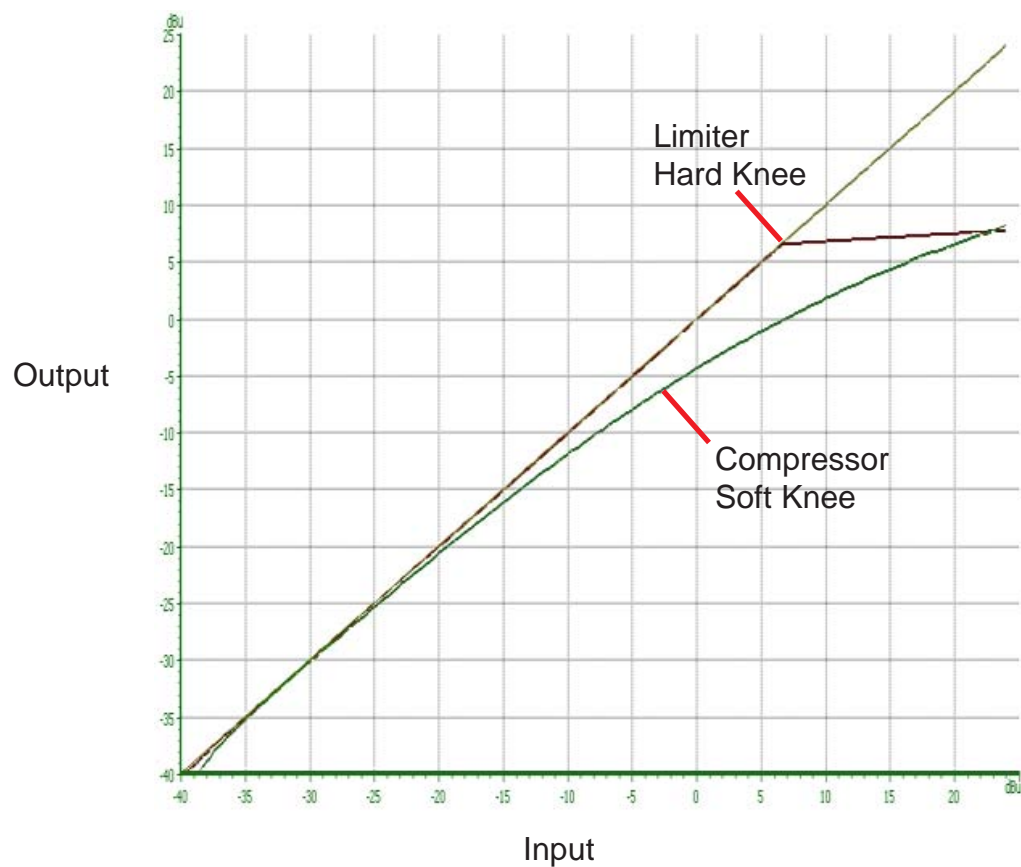
This channel is the SLAVE

Set to LINK

Set to BYPASS

LINK MODE OPERATION

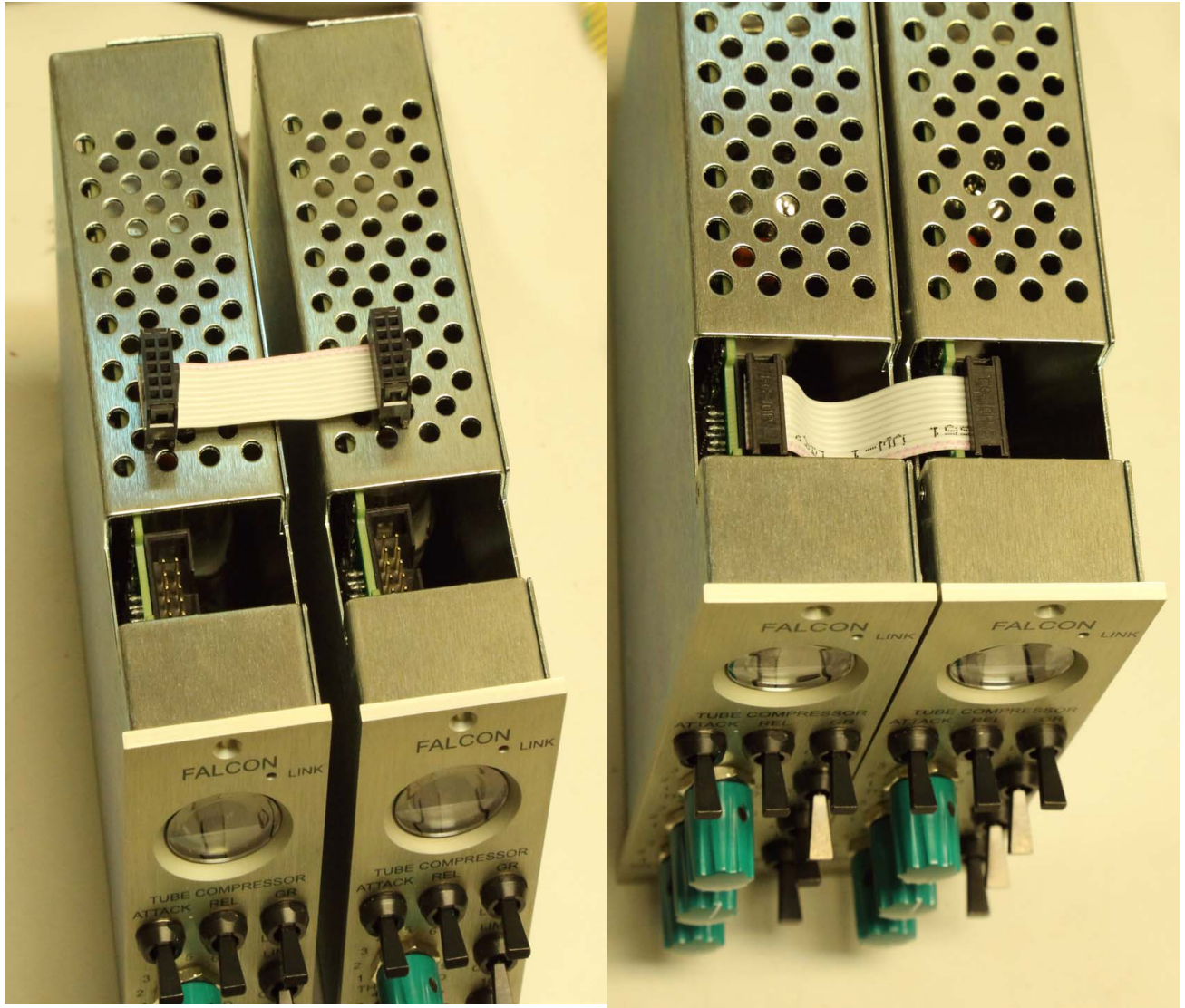
The GAIN and DRY-WET controls operate individually, all others are controlled by the MASTER. The SLAVE channel must first be in BYPASS for the LINK to work



INPUT - OUTPUT RELATIONSHIP RATIO

Falcon is a feedback design, as a result the ratio changes depending on how much gain reduction is taking place.

This measurement was made with the Attack set to fast, Release set to mid. The threshold was set so that with a +24dbu input there is 16 db of gain reduction taking place on the graph.



LINK CABLE CONNECTION

SPECIFICATIONS

Connections:	The input and output are balanced, with the output being transformer balanced.
Signal Level:	The maximum specified signal level is +26 dbu
Noise Floor:	-82.5 dbu measured 20Hz to 20 kHz
Power:	110mA with 16 volt bipolar power supplies
Tube:	12AX7B
Attack Time:	For a 12 db change, 100uS; 7mS; 20mS
Release Time:	For a 12 db change, 75mS to 200mS; 300mS to 1S; 1.4S to 3.5S; the release time changes depending on the signal