Understanding Device Implementation:

The five block stage crossover stages accomplish novel things by being in a parallel and series superimposable relationship where each stage does as many things as all of the other ones together in full parallelism with all other crossover stages.

The first stage is a *parabolic reflecting impedance matching* photonic electromagnetic *light gyrator*. This accomplishes an electromagnetic conversion into light and back as an impedance matching condition upon a feedback loop which is situated with a forward passing output and reflectionless input, for which the isolation of the circuit is electromagnetically reflected for later blocks. This is a cap that is semi-traversable by the output into the input as a first step to full isolation of the signal to noise.

The second block is a *logarithmic free impedance matching condition* circuit crossover broadband stage for each such frequency passing through the spectrum; making each individual overtone independently impedance *free* of every other such frequency. For the sake of a universal impedance matching condition it is equivalent to an equivalent summation as separated geometric product relationships.

The third block is an *impedance mirror* for which the linear to linear forward and backward traveling waves are reflectionless. They are also individually of two independent perpendicularly oriented polarizations and therefore transversally reconstruct a circularly polarized wave. This is that of a circular evolution upon either that of the input or output; because it is a reciprocal active high pass filter.

The fourth block is a *free impedance matching condition* circuit with broadband crossover *fixation* of the *light dielectric impedance*. As a consequence the co-local arbitrary conditions of the wave are foundationally of identical yet independent and mutual foundational conditions upon phase and amplitude. This stage has these properties in part owing to each such prior stage in parallel with it under feedback.

The fifth block is a *parabolic reflecting impedance* matching photonic electromagnetic <u>*negative*</u> *light gyrator*. This fixes the original parabolic relationship by imposing a negative impedance to the first stage of an ideally identical yet *negative* impedance matching condition. This configuration is designed to meet the number of half rotations to the number of crossover inversions so that the positive impedance matching condition of the original parabolic reflector is met with its same negative impedance matching condition back through the feedback loop from one end to the other.

There are two principles at work common to this design as it was developed as an idea:

1.) One is the passive element; for which the crossover configuration, multiplicity of stages, and impedance matching form a decoupling of the electromagnetic wave.

2.) Two is the active element; for which the crossover configuration, multiplicity of stages, and impedance matching admit both voltage matching and current mirroring.