1043-20-56 **Kenneth W Johnson*** (kwj1@pau.edu), Math department, 1600 Woodland Road, Abington, PA. *A combinatorial description of the simple Bol loops arising from matched pairs in groups.* Preliminary report.

I will present a way to look at the simple (left) Bol loops constructed by Nagy starting from a factorization of a simple group by using a concise combinatorial description of their left division tables. For the example of the left Bol loop of order 24 a special enumeration of the cosets of S_3 in S_4 is made, the i^{th} element of the j^{th} coset being denoted by i^j. The left division table of the loop may then be specified by a column vector $\underline{u}$ of permutations, $\underline{u} = [e, (2345), (24)(35), (2543)]^T$ and a 4×4 circulant matrix $C(\alpha, \beta, \gamma, \delta)$ whose entries are lists of integers of length 6.. The table is based on a 4×4 block matrix each of whose blocks is 6×6. The form of each block is a modified version of the left division table of S_3. (Received August 13, 2008)