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Minimal Blocking Sets with Respect to Hyperplanes in PG(n,2)

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We determine all minimal blocking sets B with respect to hyperplanes in PG(n, 2). In fact we show that a minimal blocking set B in PG(n, 2) with the property that the (projective) dimension of $\langle B \rangle$ is d, exists if and only if d is odd. In this case, |B| = d + 2 and we give the structure of such a minimal set B.