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(54) **Title:** APPARATUS AND METHOD FOR OPERATING ACOUSTO-OPTICAL DEFLECTORS

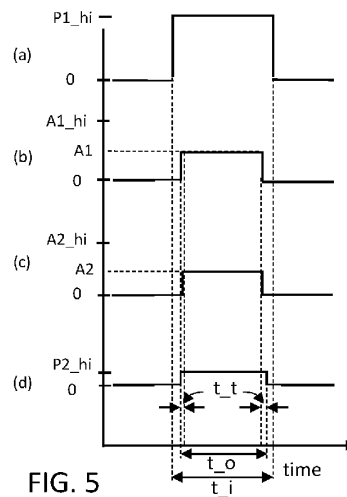


FIG. 5

(57) **Abstract:** An apparatus includes an acousto-optical deflector (AOD) system operative to deflect a beam of laser energy within a two-dimensional scan field. The AOD system includes a first AOD operative to deflect the beam of laser energy along a first axis of the two-dimensional scan field; a second AOD arranged optically downstream of the first AOD, wherein the second AOD is operative to deflect the beam of laser energy along a second axis of the two-dimensional scan field; and a controller operatively coupled to the AOD system. The controller is configured to drive each of the first AOD and the second AOD to deflect the beam of laser energy within the two-dimensional scan field and is further configured to drive the first AOD and the second AOD at at least substantially the same diffraction efficiency.

[Continued on next page]

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