



Take Better Pictures. Easier.

AUTOMATED BOUNCE FLASH TECHNOLOGY

Patent # US 7,801,483 / Patent Pending #12/855,437

Automated Bounce Flash (“ABF”) Technology provides an effective way to achieve a proper bounce flash by integrating multiple compact flash capabilities and sensors along with proprietary software within the body of the camera. Cameras with ABF Technology can take studio-quality photos and still fit in your pocket.



PHOTO TAKEN WITH DIRECT FLASH
(notice the harsh shadow
and washed out color)



PHOTO TAKEN WITH BOUNCE FLASH
(even, natural lighting and no shadow)



Take Better Pictures.Easier.

Better Lighting = Better Pictures

Get professional results without the fuss and extra equipment. On-camera direct flash has been around since the point-and-shoot camera was invented. And since that time, photographers (amateurs and professionals) have had to battle with harsh flash shadows, red-eye and washed-out pictures. The **direct flash, although conveniently built-in, is very poor at providing natural looking lighting and is reluctantly used by most enthusiasts and professionals.**

How ABF Technology work?

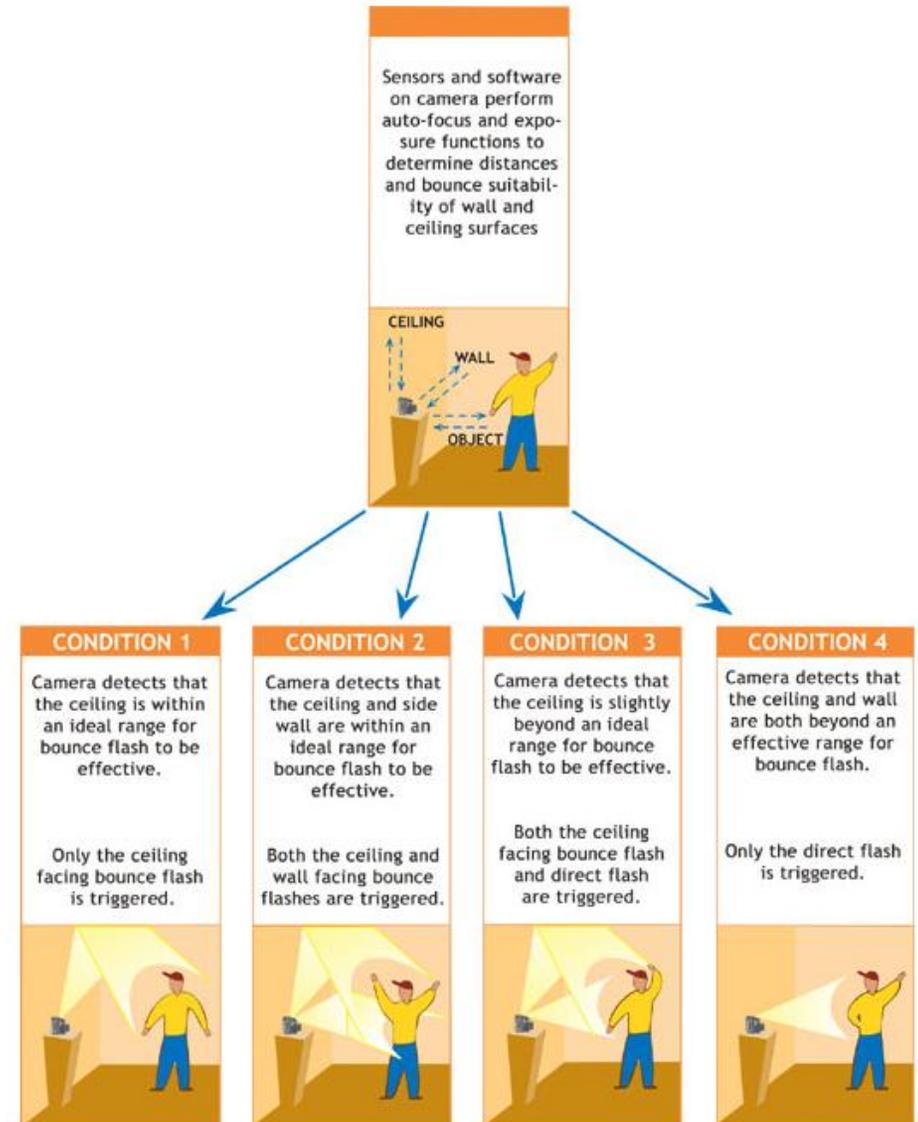
It is quite simple really... ABF technology adds sensors and multiple flash capabilities to a standard camera. It also includes software to work with the sensors to detect the environment and determine the appropriate power each flash unit in order to optimize the lighting conditions for the photograph.

A major drawback of accessory flash devices (such as hot-shoe mounted flashes) is that they are extremely bulky and defeat the mobility and convenience of modern cameras. The ABF technology was designed to minimize the additional size by customizing electronic components to be effective in the vast majority of situations where bounce flash is required. In some variations, ABF is implemented-edge LED technology that has dramatic size improvements over the traditional Xenon flash technology.

Accessory flash devices also require significant forethought and time from the photographer to adjust angles and power levels. This planning is nearly impossible for consumers who are often trying to capture candid indoor images of children or at social events. **ABF technology addresses this problem by automatically detecting locations and suitability of bounce surfaces and directs light in the appropriate directions without any user manipulation.**

Consumers Demand It

As digital cameras have become more sophisticated, so has the consumer. They are demanding superior resolution and additional functionality in compact designs. The industry is responding by creating new product classes such as the prosumer DSLR and interchangeable lens compact camera. **Consumers already recognize the benefits of bounce flash and are turning to aftermarket and DIY sources to modify their cameras to allow this functionality. (lightscoop.com; [DIY](#))**



NOTE: For simplicity, only four conditions were described. Depending on the complexity of the camera utilizing ABF Technology, many more conditions may exist of which the camera will automatically select.



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Industry and Technology Trends

Historically, xenon flash required bulky components preventing bounce flash from being included within the camera body. Recent advances in both low power xenon-based bounce flash systems and LED flash technology have made bounce flash integration possible. In fact, The Petrov Group, a leading market research group, has predicted that **75% of all digital cameras will utilize LED flash technology by the year 2014** ([Petrov Article](#)). Companies like Apple and Nikon have recently applied for patents with indirect flash units. Apple's US Patent Application ([12/409,175](#)) is for a "smart flash" functionality and Nikon has recently filed for patent ([link](#)) in Japan for a camera with a built-in bounce flash mirror. The desire for better images and the advancement in flash technology is pushing cameras towards integration of bounce flash units.

Patented Technology

The ABF Technology is already patented under US Patent # US 7,801,483 and has a divisional patent application still pending (#12/855,437). The patent provides significant protection for an integrated bounce flash unit. Copies of the patent are available upon request.

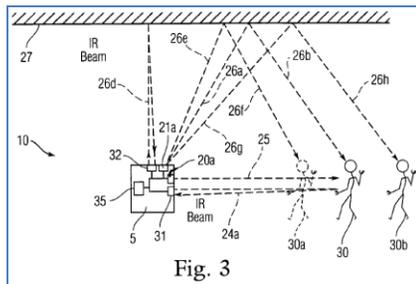


Fig. 3

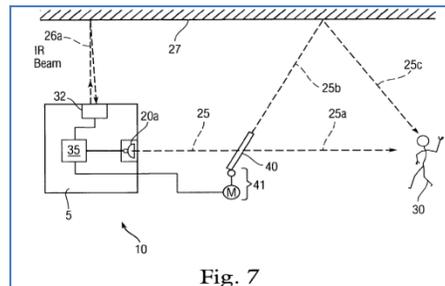


Fig. 7

Summary

With over 100 million digital cameras sold worldwide per year and an increasingly sophisticated consumer demanding superior functionality, manufacturers will need to provide more than just additional megapixels and fashion-colored cameras to compete. ABF Technology is poised to be the distinguishing feature to attract camera buyers. **ABF Technology allows consumers to take better pictures easier, faster and at less expense than ever before.**

ABF Technology is available for licensing or purchase. Please address inquiries to :

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