CLAIMS

~~1. A reflective holographic recording/reproducing method, comprising: using a spherical wave as a reference light of shift multiplex recording, wherein an optical axis of the reference light is perpendicularly incident on a storage medium on which a reflection layer is plated.~~

~~2. The holographic recording/reproducing method according to claim 1, wherein the reference light incident on a medium and the reference light transmitted through the medium and reflected by the reflection layer are propagated coaxially.~~

~~3. The holographic recording/reproducing method according to claim 1 or 2, wherein a phase conjugate reproduction light of a hologram is generated by the reference light that is transmitted through the medium and reflected back to the medium by the reflection layer.~~

~~4. A reflective holographic recording/reproducing method, comprising: performing vertical incidence of a signal light on a storage medium plated with a reflection layer in a shift multiplex recording hologram memory using a spherical wave as a reference light.~~

~~5. The holographic recording/reproducing method according to claim 4, wherein a phase conjugate reproduction light is obtained in a manner that a reference light transmitted through a medium reproduces a hologram after the reference light is reflected via the reflection layer.~~

~~6. The holographic recording/reproducing method according to claim 4 or 5, wherein a reproduction light and the phase conjugate reproduction light thereof are coaxially and coherently added.~~

~~7.~~1. A reflective holographic optical storage method, comprising:

performing an interference between a reference light and a signal light to form a hologram on a storage medium plated with a reflection layer;

using the same reference light to be incident on the same position to generate a normal reproduction light that is symmetrical and opposite to the signal light relative to a normal line of the storage medium when reproducing the hologram; and

loading a conjugate reference light to generate a conjugate reproduction light that is coaxially and opposite to the signal light;

wherein the reference light enters the storage medium not along the normal line to form the conjugate reference light after being reflected by the reflection layer and a mirror; and a reflected light enters the storage medium along the normal line, and when a holographic light is reproduced, the generated normal reproduction light is in the same direction with the conjugate reproduction light.

~~8. The holographic optical storage method according to claim 7, wherein the reference light enters the storage medium along the normal line to form the conjugate reference light after being reflected by the reflection layer.~~

~~9. The holographic optical storage method according to claim 7, wherein the reference light enters the storage medium not along the normal line to form the conjugate reference light after being reflected by the reflection layer and a mirror.~~

~~10.~~2. The holographic optical storage method according to claim ~~9~~1, wherein the reference light is reflected by the reflection layer twice in succession, and is reflected by the mirror along an original optical path between two reflections by the reflection layer to form the conjugate reference light.

~~11. The holographic optical storage method according to claim 9 or 10, wherein a reflected light enters the storage medium along the normal line, and when a holographic light is reproduced, the generated normal reproduction light is in the same direction with the conjugate reproduction light.~~

~~12.~~3. A reflective holographic optical storage device, comprising:

a conjugate reference light loading device;

a normal reproduction light receiving device; and

a conjugate reproduction light receiving device,

wherein the conjugate reference light loading device forms a reference light into a conjugate reference light, the reference light generates a normal reproduction light, the conjugate reference light generates a conjugate reproduction light, the normal reproduction light is symmetrical and opposite to a signal light relative to a normal line of a storage medium, and the conjugate reproduction light is coaxially and opposite to the signal light;

when the reference light enters the storage medium not along the normal line of the storage medium, the conjugate reference light loading device is a reflection layer plated on the storage medium and a mirror provided on an optical path of the reference light reflected by the reflection layer; and

wherein when the signal light enters the storage medium along the normal line, the generated normal reproduction light is in the same direction with the conjugate reproduction light, and the normal reproduction light receiving device and the conjugate reproduction light receiving device are the same receiving device.

~~13. The holographic optical storage device according to claim 12, wherein when the reference light enters the storage medium along the normal line of the storage medium, the conjugate reference light loading device is a reflection layer plated on the storage medium, and a side where the reflection layer is located is the other side on which the reference light is incident.~~

~~14. The holographic optical storage device according to claim 12, wherein when the reference light enters the storage medium not along the normal line of the storage medium, the conjugate reference light loading device is the reflection layer plated on the storage medium and a mirror provided on an optical path of the reference light reflected by the reflection layer.~~

~~15. The holographic optical storage device according to claim 14, wherein when the signal light enters the storage medium along the normal line, the generated normal reproduction light is in the same direction with the conjugate reproduction light, and the normal reproduction light receiving device and the conjugate reproduction light receiving device are the same receiving device.~~