

SEGA CHANNEL SUMMARY

The SEGA CHANNEL is a satellite delivered interactive game service distributed and sold by cable television systems as a premium subscription channel. The technical operation of the channel begins at the SEGA CHANNEL studio in San Francisco. This is where SEGA CHANNEL artists design the menus, write the hints and pick the games each month. The line-up of games with all the menus and hints is called the image. The image is recorded on a CD-ROM disk and sent to the uplink.

The uplink for the SEGA CHANNEL is located in Denver Colorado. When the image CD-ROM arrives at the uplink, it is installed into the uplink game server computer. The game server continuously combines the image data with conditional access transactions generated in the SEGA CHANNEL national authorization system and transmits the SEGA CHANNEL to the Galaxy 7 satellite on transponder 1.

From Galaxy 7, downlinks are received at cable headends all over the country. At the headend a specialized QPSK satellite receiver tuners and demodulates the data of the SEGA CHANNEL. The receiver output is the baseband digital signals carrying the image. These baseband signals are processed for cable plant distribution by QPR modulators which the cable system engineers adjust to the carrier frequencies compatible with the existing television and audio channel line-up in the plant. The QPR modulator output is combined with all the other television and audio channels and sent into the distribution plant trunks on the way to the subscribers.

Inside the home, a coupler is used to split the cable drop to the set-top converter for regular television and to the SEGA CHANNEL adapter for game service. The adapter is the physical equipment that the cable system gives subscribers to the SEGA CHANNEL. The adapter has three connections that are needed for proper service; the RF drop input, power (via a wall mounted AC transformer) and the cartridge slot connection to the Genesis game player console.

When the adapter is first connected to the RF drop (and power), it begins searching for SEGA CHANNEL carriers. After it has scanned the entire frequency spectrum of the cable plant and found the SEGA CHANNEL carriers, the adapter stores the carrier frequencies that the system has selected for the SEGA CHANNEL. These carrier frequencies are stored in non-volatile memory and are retained even if the power is disconnected. This means that even if it is totally disconnected from the RF drop and power, the adapter will always quickly tune to the SEGA CHANNEL as soon as it is reconnected.

The adapter will keep a downloaded game playable as long as power is connected up to 24 hours after the download. This means that once a download is complete, the RF drop can be disconnected and not affect game play. Adapters will be authorized before installation and will be ready to download and play games as soon as connected. The monthly authorization is good for 28 days from the subscribers sign-up date and the adapter remembers the authorization even if power is disconnected. If the RF drop or power is disconnected at the subscribers 28 day boundary, a delay determined by the total number of subscribers will be seen until a re-authorization message gets to the adapter. This delay will typically be no longer than 1 minute.

Once a game is downloaded it works exactly like cartridge games bought at retail stores. Pressing the RESET button on the Genesis console restarts the downloaded game. All controls and features work exactly the same. Only the SEGA CHANNEL specific MENU button is different. This button deletes the downloaded game and reloads the SEGA CHANNEL main menu allowing the subscriber to pick a new game to play.