

IMPORTANT INFORMATION

If you read nothing else of these "instructions," do read the following bullet points:

- This charter requires special scenery created by Alex Nicolson that is included in the download package. Most airfields will not be recognized by FS9. Therefore, for "go to airport" purposes, you must either fly to the airport, or choose the "move to origination field" when loading the FS9 flight plans that have been created for every airfield in the flight tables. Aircraft placement, when using "go to airport" in FS9 works, is also unavoidably a bit off in some cases and a little taxi time may be necessary. Last of all, the scenery will sometimes cause oddities in the scenery, but nothing fatal should occur.
- The overall experience of this charter is also greatly enhanced, at least in my opinion, by installing the Golden Wings modification which removes modern cities and airports.
- This is also the first charter to have a reward for flying. Completing twenty five missions flying 'The Hump' will qualify you for a certificate, which may be viewed on the DC-3 Airways 'Awards' page.
- I can be reached at n6zxe@yahoo.com if you have questions or problems with this charter. If problems are discovered, I will do my best to correct them and get revised documentation on the DCA website.

FLYING THE HUMP - Revised

Why this revision?

The original HUMP charter consisted of 7 flights, 8 if you count the reverse direction of Route Able. Only 10 airfields were used. This revision contains 36 flight routes with a total of 490 (by my count) unique waypoint to waypoint reportable legs using 52 airfields. This will allow for flights from the beginning to the end of an individual route, or shorter shuttle flights between waypoints in the route. Also, as often happened in real CBI airlift flights; strong headwinds on the return flight sometimes required a pilot to make a stop at an intermediary airfield to add more fuel before continuing their journey to their home base after delivering their precious cargo in China.

A (very) brief history of the CBI Airlift:

I thought I'd provide a brief history of the CBI airlift, but on second thought, rather than try to summarize the history of the CBI Airlift; I'll recommend a book to read. If you have interest in this period and place in history, get "Flying the Hump" by Otha Spencer. This is an excellent book on the subject written by, according to my understanding, a professor of journalism. Well written and concise, this is the one book to buy if you're only going to buy one. Additional information on this book and others is given at the end of this introduction. Also, the Radio Range charter on the CBI Airlift by Dave Bitzer has a lot of background information on the Hump.

How to read the flight tables:

First things first! These tables have their origin in various 1945 route maps and tables as well as descriptions in books on the subject or related to me by CBI Airlift pilots. Some liberties have been taken to keep the number of tables to a minimum. For example, Route Charlie has 5 origination airfields in China; Kunming, Luliang, Lo-Ping, Chanyi and Yangkai. Rather than have separate charts (1 for each of these origination airfields), I have chained Lo-ping, Luliang and Kunming together and chained Chanyi and Yangkai

together, resulting in only 2 tables for flights heading for the upper Assam valley and 2 tables for flights heading to the lower Assam valley. That's a total of 4 vs. 10 tables!

Another table reducing adjustment has been made for some routes with multiple destinations airfields. Imagine the palm of your hand as waypoint towards the end of a flight route, with a destination airport at the end of each finger. The tables in these instances will be divided by a heavy black bar. Rows above the line are intended to be flown in order from waypoint to waypoint. Rows below the line are single leg directions to each of the individual destination airfields. See table Able 1 as an example.

A final "tweak" to reduce tables occurs when a single isolated destination airfield exists apart from the normal flow of the route. In these cases, the table will instruct you at the appropriate waypoint to skip ahead to a specified row for directions to the isolated airfield. See table A3 for an example of this.

Alex Nicolson's custom scenery includes a very large number of airfields, taken from actual USAAF charts or other sources in Alex's possession that are not used by this charter. Many were used for conducting the air war in China and Burma and not necessarily for specific "Hump" freight operations. However, it was necessary to supply all these fields with material, supplies, fuel and men, so you can be assured that this necessitated ATC flights by C-47's, C-46's and C-87's, among many others. A limited number of these airfields have been added to the routes in this charter to help avoid long "dead reckoning" flying when their inclusion did not significantly alter the general route flight plan. Perhaps a 2nd set of charts will be created someday to incorporate more of these historic airfields.

Now for an explanation of the design of the tables! Columns 1 thru 4 provided information the individual waypoints; number in the route, ID, beacon frequency and name. Column 5 provides abbreviated departure procedures. Columns 6 thru 9 provide directions from waypoint to waypoint; magnetic bearing, minimum IFR altitude (established for the most part by the USAAF during WWII) and mileage for both the leg and also cumulative from the first airfield in the table. The final 3 columns provide information for the airfield corresponding to the waypoint beacon, including elevation, runway orientation and, perhaps most important, the bearing and distance to the airfield from the waypoint NDB. Bearings in **bold** face means the bearing will line you up with the runway for an instrument landing if necessary. Bearings not in bold face are to the center of the runway and are not recommended in poor visibility; divert to another airfield.

How to submit PIREPs:

Each table includes a specific PIREP number for that table. For example, the PIREP number for table Able 1 is 1066-11-A1. This PIREP number is all you need if you are flying from the first to the last airfield of the table. However, if you choose to begin and / or end your flight at an airfield other than the first or last ones listed on the table, then the PIREP number must also include the waypoint numbers. Again, using table Able 1 for our example, say you are going to fly between Misamari and Lo-Shan, waypoints #2 & #10. Simply submit your PIREP number as 1066-11-A1 2/10.

How to fly the routes

It should be obvious by now that this charter is documented much different that what you may be used to. Directions given in the tables are from NDB to NDB. Depending on an airfield's distance and bearing from an NDB, you may have to do a bit of mental navigation to either locate the destination airfield or to pick up the outbound bearing from the origination airfield's NDB. These tables are somewhat similar to what many CBI pilots carried with them when they flew the Hump.

While FSNav and FS9 flight plans have been created, it is highly recommended that they not be used other than to get a visual preview of the route you are going to fly. Flying waypoint to waypoint, using only the NDB signal and dead reckoning, when necessary, will give you a more realistic sense of what the CBI airlift pilots went through.

Here are two more recommendations.

First, aircraft commonly departed with full tanks in addition to whatever cargo they were carrying (usually gas in 55 gallon drums). Then, while the cargo was offloaded in China, additional gas would be siphoned from the wing tanks, leaving just enough for the return flight back to India and Burma. Therefore, for a more realistic experience, leave for China with full tanks and sufficient cargo to bring your aircraft up to its maximum gross weight, or even a little over. Then, for the return trip, start with very limited cargo weight and just enough estimated gas to get you home again.

Second, CBI pilots commonly had to deal with poor visibility, hellacious thunderstorms, winds of up to 100 mph or more and severe turbulence, with altitude changes of 1,000's of feet in just a few minutes. Talk about an "E-Ticket" ride! Poor visibility could mean flying the Hump for up to 6 months at a time without ever seeing the mountains below them. Consequently, fly using real weather which, unfortunately, does not seem capable of recreating the type of weather encountered by the CBI pilots.

A note about high altitude flying and your choice of aircraft:

Able route will call for flying at 20,000 feet. The MAAM DC3 has functioning blower switches which make the high altitude flying much easier. But, every other DC3 available in FS9 can fly this route, even with a full load and maximum gross weight at take-off. Just take it slow so you don't burn up an engine. In real life, pilots flew in circles to gain sufficient altitude prior to heading for the mountains. This was especially true when departing from the upper Assam valley airfields such as Chabua, Sookerating, Dinjan and Mohanbari.

Please note that this charter is suitable for both the DC3 and DC4 as both were flown during WWII. The actual chronology of aircraft used was something like the DC3/C47 in the early periods, then the arrival of the C46 and converted B24s. The DC4/C54 didn't appear until late 1944 or 1945. However, the C47 was still in use in large number throughout the entire CBI Airlift operation.

Recommended reading:

There is so much information available on the internet concerning the CBI airlift, that I'll leave the discovery up to you if you wish to pursue it. Just use search phrases such as "CBI airlift," "flying the Hump," etc.

Here is a list of books that can be found for purchase online...

Spencer, Otha C. Flying the Hump - Memories of an Air War. College Station: Texas A & M University Press, 1992

If you buy only 1 book, this is the one I recommend

Ethell, Jeff & Downie, Don. Flying the Hump in Original World War II Color. St. Paul: Motorbooks International, 2004

This is my 2nd recommendation; coffee table type book with lots of photos

Constein, Dr. Carl Frey. Born to fly... The Hump. Bloomington: First Books Library, 2001

Constein, Dr. Carl Frey. Tales of the Himalayas - Letters from WWII Airmen who flew the Hump.
Bloomington: First Books Library, 2002

King, Steven C. Flying the Hump to China. Bloomington: Author House, 2004

Special thanks:

I cannot say enough to thank Alex Nicolson for his custom scenery that provided the airfields and NDB stations that make these flights possible. Without his work, most of the historic locations used in this charter would be unavailable. Please read Alex's "readme" file and if you appreciate his work as much as I do, send him an e-mail to express your appreciation.

Special thanks also go to Jay Vinyard of Texas and Jim Segel of California, both former CBI airlift pilots, who have both provided me with additional information not found in any of the books I've read. Jim actually flew the Hump prior to its being taken over by the USAAF. At one point, he was asked to take a couple of days and ferry supplies from Kunming to Flying Tiger bases further east in China. He ended up spending something like 3 months doing this before going home.

Some general notes on the CBI Hump routes:

Hump flights were done 7 days a week, 24 hours a day. Consequently, as the various routes were developed, they provided for safe separation of aircraft, particularly for those flying in opposite directions. Routes generally flew in one direction only, with a few exceptions. There were four main areas involved in the CBI operation. In India was the Assam Valley to the north and the Bengal area in the south. In China was the Chengtu area to the north and Kunming to the south. A number of route maps are included with this package that includes most of the routes described in this charter. Generally speaking, the routes cover the following areas:

Able - Upper Assam Valley to Chengtu; east & westbound
Baker - Kunming area to Assam Valley; westbound only
Charlie - Kunming area to Assam Valley; westbound only
Easy - Upper Assam Valley to Kunming; eastbound only
Fox - Lower Assam Valley to Kunming; eastbound only
King - Chengtu to Lower Assam Valley; westbound only
Love - Central Burma to Chengtu; eastbound only
Mike - Kunming to Chengtu; north & southbound
Nam - Bengal area to Kunming; eastbound only
Oboe - Kunming to Bengal area; westbound & limited eastbound
Shuttle flights - Bengal & Assam Valley to Central Burma; eastbound and westbound
China Express - Kunming to AVG airbases in the East; eastbound and westbound
Extras - DC4 routes flown by CBI pilot Steven King

Happy flying!