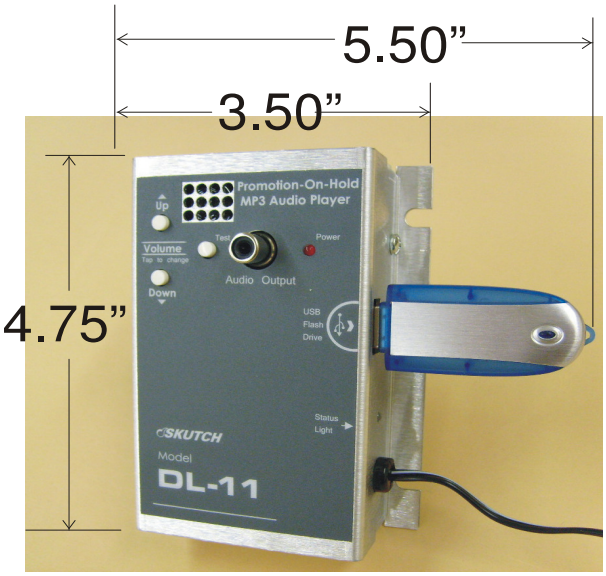
SKUTCH

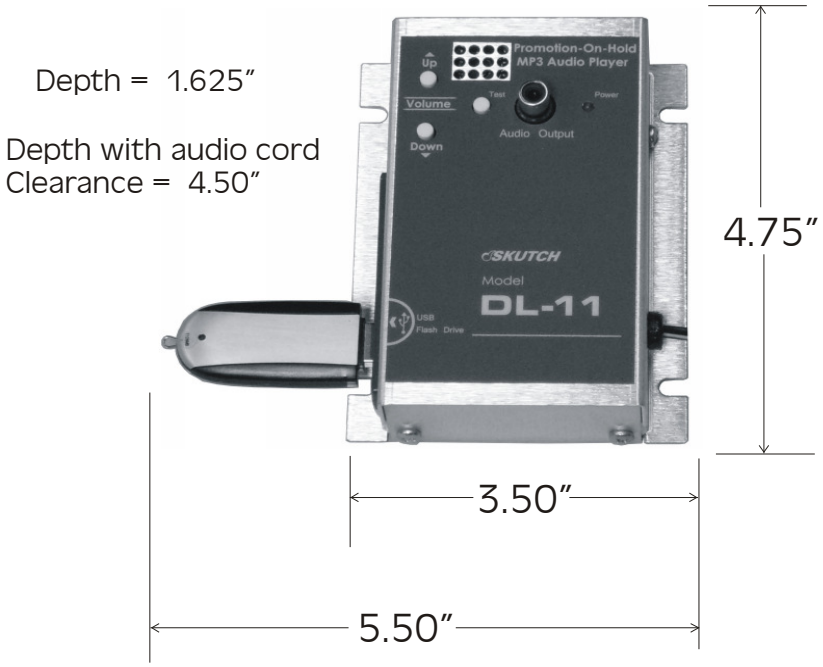
"TELECOMMUNICATION PRODUCTS TO SOLVE TELECOMMUNICATION PROBLEMS"

4/14/2010

DL-11 Technical Information



S/N B0043513 and above



Size: See above

Length of Power cord (Power Cube) = 5 Ft.

Weight in box = 1.10 lbs

Accessories that come with unit:

One RCA Male to RCA Male, 5 ft cable
One RCA Female to 1/8" Phone Male, Adapter
One 128MByte USB Flash Drive
One DL-11 Operation Manual
Two #8, Phillips-Pan Head, 1 inch, sheet metal screws

Power Requirements:

Input Voltage = 120VAC 60Hz
AC Input Current = 27mA
Input Power = 3.10 Watts

Audio Specifications

Audio Output = RCA Female Jack
Audio Output Power = Approximately 200mW
Output Impendence = 8 ohm (Will work with 600 ohm also)
Volume Steps = 64 (1 step per depression of switch) Must TAP on button to make a change.

Frequency Response:

At 600 ohm load: 10Hz to 20,000 Hz
At 10 ohm load: 130Hz to 20,000 Hz

((Test audio was generated at a -6DB level. Test audio was recorded using a 44,100 Hertz sample rate, 16 bit, to a WAV file. Then it was converted to an MP3 at 44,100 Hertz sample rate, 128KBPS, format and placed into the DL-11 for testing. The output load on the DL-11 was a 100% resistive load.))

MP3 Compatible Formats

DL-11s with S/N A9010001 and above:
These units are compatible with all known MP3 formats. Can use both Fixed and variable Rate.

DL-11s with S/N Below A9010001
The following is a list of MP3 formats that we have tested these versions of DL-11s to be compatible with. All other formats should not be used on these DL-11 units:

MUST use fixed rate.

MPEG Layer-3 ACM, 48,000 Hz, 224 kbps, stereo

MPEG Layer-3 ACM, 48,000 Hz, 192 kbps, stereo
MPEG Layer-3 ACM, 48,000 Hz, 160 kbps, stereo
MPEG Layer-3 ACM, 48,000 Hz, 128 kbps, joint stereo
MPEG Layer-3 ACM, 48,000 Hz, 128 kbps, mono
MPEG Layer-3 ACM, 48,000 Hz, 112 kbps, joint stereo
MPEG Layer-3 ACM, 48,000 Hz, 112 kbps, mono
MPEG Layer-3 ACM, 48,000 Hz, 96 kbps, joint stereo
MPEG Layer-3 ACM, 48,000 Hz, 96 kbps, mono
MPEG Layer-3 ACM, 48,000 Hz, 80 kbps, mono
MPEG Layer-3 ACM, 48,000 Hz, 64 kbps, mono
MPEG Layer-3 ACM, 48,000 Hz, 48 kbps, mono

MPEG Layer-3 ACM, 44,100 Hz, 256 kbps, stereo
MPEG Layer-3 ACM, 44,100 Hz, 224 kbps, stereo
MPEG Layer-3 ACM, 44,100 Hz, 192 kbps, stereo
MPEG Layer-3 ACM, 44,100 Hz, 160 kbps, stereo
MPEG Layer-3 ACM, 44,100 Hz, 128 kbps, joint stereo
MPEG Layer-3 ACM, 44,100 Hz, 128 kbps, mono ****Recommended ****
MPEG Layer-3 ACM, 44,100 Hz, 112 kbps, joint stereo
MPEG Layer-3 ACM, 44,100 Hz, 112 kbps, mono
MPEG Layer-3 ACM, 44,100 Hz, 96 kbps, joint stereo
MPEG Layer-3 ACM, 44,100 Hz, 96 kbps, mono
MPEG Layer-3 ACM, 44,100 Hz, 80 kbps, mono
MPEG Layer-3 ACM, 44,100 Hz, 64 kbps, mono
MPEG Layer-3 ACM, 44,100 Hz, 56 kbps, mono
MPEG Layer-3 ACM, 44,100 Hz, 48 kbps, mono

MPEG Layer-3 ACM, 32,000 Hz, 224 kbps, stereo
MPEG Layer-3 ACM, 32,000 Hz, 192 kbps, stereo
MPEG Layer-3 ACM, 32,000 Hz, 160 kbps, stereo
MPEG Layer-3 ACM, 32,000 Hz, 128 kbps, joint stereo
MPEG Layer-3 ACM, 32,000 Hz, 128 kbps, mono
MPEG Layer-3 ACM, 32,000 Hz, 112 kbps, joint stereo
MPEG Layer-3 ACM, 32,000 Hz, 112 kbps, mono
MPEG Layer-3 ACM, 32,000 Hz, 96 kbps, joint stereo
MPEG Layer-3 ACM, 32,000 Hz, 96 kbps, mono
MPEG Layer-3 ACM, 32,000 Hz, 80 kbps, mono
MPEG Layer-3 ACM, 32,000 Hz, 64 kbps, mono
MPEG Layer-3 ACM, 32,000 Hz, 56 kbps, mono
MPEG Layer-3 ACM, 32,000 Hz, 48 kbps, mono

MPEG Layer-3 ACM, 24,000 Hz, 80 kbps, joint stereo
MPEG Layer-3 ACM, 24,000 Hz, 64 kbps, joint stereo
MPEG Layer-3 ACM, 24,000 Hz, 56 kbps, joint stereo
MPEG Layer-3 ACM, 24,000 Hz, 48 kbps, joint stereo
MPEG Layer-3 ACM, 24,000 Hz, 48 kbps, mono

MPEG Layer-3 ACM, 24,000 Hz, 40 kbps, joint stereo
MPEG Layer-3 ACM, 24,000 Hz, 40 kbps, mono
MPEG Layer-3 ACM, 24,000 Hz, 32 kbps, joint stereo
MPEG Layer-3 ACM, 24,000 Hz, 32 kbps, mono
MPEG Layer-3 ACM, 24,000 Hz, 24 kbps, mono

MPEG Layer-3 ACM, 22,050 Hz, 80 kbps, joint stereo
MPEG Layer-3 ACM, 22,050 Hz, 64 kbps, joint stereo
MPEG Layer-3 ACM, 22,050 Hz, 56 kbps, joint stereo
MPEG Layer-3 ACM, 22,050 Hz, 48 kbps, joint stereo
MPEG Layer-3 ACM, 22,050 Hz, 48 kbps, mono
MPEG Layer-3 ACM, 22,050 Hz, 32 kbps, joint stereo
MPEG Layer-3 ACM, 22,050 Hz, 32 kbps, mono
MPEG Layer-3 ACM, 22,050 Hz, 24 kbps, mono

MPEG Layer-3 ACM, 16,000 Hz, 80 kbps, joint stereo
MPEG Layer-3 ACM, 16,000 Hz, 64 kbps, joint stereo
MPEG Layer-3 ACM, 16,000 Hz, 56 kbps, joint stereo
MPEG Layer-3 ACM, 16,000 Hz, 48 kbps, joint stereo
MPEG Layer-3 ACM, 16,000 Hz, 48 kbps, mono
MPEG Layer-3 ACM, 16,000 Hz, 40 kbps, joint stereo
MPEG Layer-3 ACM, 16,000 Hz, 40 kbps, mono
MPEG Layer-3 ACM, 16,000 Hz, 32 kbps, joint stereo
MPEG Layer-3 ACM, 16,000 Hz, 32 kbps, mono
MPEG Layer-3 ACM, 16,000 Hz, 24 kbps, mono
MPEG Layer-3 ACM, 16,000 Hz, 20 kbps, mono
MPEG Layer-3 ACM, 16,000 Hz, 18 kbps, mono
MPEG Layer-3 ACM, 16,000 Hz, 16 kbps, mono

MPEG Layer-3 ACM, 12,000 Hz, 32 kbps, joint stereo
MPEG Layer-3 ACM, 12,000 Hz, 24 kbps, joint stereo
MPEG Layer-3 ACM, 12,000 Hz, 20 kbps, joint stereo
MPEG Layer-3 ACM, 12,000 Hz, 20 kbps, mono
MPEG Layer-3 ACM, 12,000 Hz, 18 kbps, joint stereo
MPEG Layer-3 ACM, 12,000 Hz, 18 kbps, mono
MPEG Layer-3 ACM, 12,000 Hz, 16 kbps, mono

Playing Multiple MP3 Files

Normally you would store only one MP3 audio file on the DL-11 USB Flash drive. In this case the DL-11 will repeatedly play this single MP3 file over and over again. If you place multiple MP3 files on the USB Flash drive, the DL-11 will play the first file that was copies to the USB Flash drive, followed by the second, and so forth, until all files have been played. Once the DL-11 has played the last file, it will repeat the sequence over and over again. If you wish to control the order in which the files play, simply perform a high level format on the USB Flash drive, and save the audio files to the USB

Drive in the order that you wish them to be played. They will not play in alpha-numeric order.

Multi-Messages

You can store up to 20, six minute audio productions on the 128MB flash drive. The DL-11 allows you to easily switch between these messages. The first step is to store multiple MP3 files on the Flash Drive. This must be done from an external computer. Once the files are stored, put the Flash Drive back into the DL-11 and perform the first Multi-Message Switching operation. When this is done, the DL-11 will leave the first file as an MP3 extension, then will rename all the other MP3 files with an "MPP" extension. This will disable them from being played. If the original file names are longer than 8 characters, then the DL-11 will rename your files based on the DOS 8.3 platform. For example a file named "Christmas Special Message.MP3", would be relabeled "Christ~1.MPP".

Switching Between Productions

1- While the current production is playing, hold down both the UP and DOWN Volume buttons, at first the GREEN light will turn on steady and the playback will stop. After about 4 seconds, the GREEN LED will start to flash, then release. The number of times that the GREEN LED flashes, indicates how many productions are currently stored on the Flash Drive.
2- Press down the TEST button to verify if this is the desired promotion. If not, simply repeat step one and two, until the desired promotion is selected.

Notes:

1- If you release the buttons before the GREEN LED starts to Flash, it simply RESETS the DL-11 with the current production.
2- The DL-11 accomplishes multi-messaging by renaming the files stored on the Flash Drive. The selected production will have an "MP3" extension, while a non-selected production will have an "MPP" file extension. If you wish to supply your customer with a FLASH Drive with several productions on it, then rename the files that you do not want to play with the extension "MPP".

Recommended Recording Procedures:

1- Record final mix of production audio into a WAV file at 44,100 Hertz sample rate, 16 bit.

2- Store in WAV format for future editing purposes.

3- Convert WAV file to MP3 format at 44,100 Hertz sampling at 128KBPS. Then put on USB Flash Drive. Make sure you delete the old MP3 audio file.

USB Flash Drive Specifications

Type: USB1.1 or USB2.0

Drive Size	Approx Play Time
32MB	30 Minutes

64MB	1 Hour
128MB	2.13 Hours (Supplied with DL-11)
256MB	4.26 Hours
512MB	8.52 Hours
1 GB	17 Hours

Based on an MP3 file generated at 44,100 Hertz sample rate and 128KBPS.

Trouble Shooting

Problem:
DL-11 Not Playing. If it is playing, the GRN LED next to the USB Drive will flash.
Solution:
There is no MP3 file on the USB Flash drive.

With S/N of A9010001 and Above (Supports all MP3 formats).

With no MP3 file, the LED next to the USB Flash Drive repeats the following Sequence over and over again.
GRN ON Steady for 4 seconds, OFF for 2 seconds, then RED/GRN Flash 3 times.

On Power Up with Defective USB Flash Drive

RED/GRN flash 3 times, then stays OFF

With S/N Below A9010001

With no MP3 file:

LED next to DRIVE flashes RED/GRN 3 times
Solid GRN for 4 sec, then OFF for 2 sec.
Keeps repeating this sequence, over and over again.

Problem:
After Replacing MP3 file with new file, DL-11 continues to play old MP3 file.
Solution:
Reformat the DL-11 USB Flash drive, then re-copy the new file to the USB Flash Drive.

Problem:
Can't seem to change the volume.
Solution:
You must repeatedly tap on the VOL UP and/or VOL DOWN buttons, many times to make a noticeable volume change. Each tap, represents one step. There are a total of 64

volume steps in the volume range. Holding down a button only changes the volume 1 step.

Warranty:

Limited Three (3) Year Parts and Labor. See operation manual for specifics.