New or different from the LanBox and LCedit+ manuals.

IR remote control for LanBox-LCM and LCE with firmware v2.06 or later.

1. Support for IR remotes using one of the following protocols: Sony (12, 15 or 20 bits), RC5, RC6, or NEC. IR Keys can now be freely mapped to a LanBox command.

2. The IR Power or Menu key toggles between Home display (----) and menu 5 (layer/cues), this makes it possible to use minimal IR remotes (like Apple remote) to do Go, Go next, Go previous.

3. IR option Config code 0001 togles between next and previous -step- commands or previous and next -CUE- commands.

4. IR remote auto repeat keys has been added to "edit" states like Cue number, Channel value, etc.

The new firmware allows you to map IR keys to remote functions for 2 different IR remotes at the same time. The IR key map is written as a cuestep, so it can be exchanged with others. Default IR1 is Apple remote, and IR2 is the Sony RM-V202.

Mapping your IR remote keys to LanBox commands:
1. Press any key but NOT Power or Menu, if the LanBox recognizes your remote it displays either NEC, RC5, RC6, or SONY. If it does not react, you need to find another type/make of IR remote.

2. Press the Power (or Menu) key 3 times short, one long, 3 times short, one long; you should see IR1 on the display. If not try from step 1 again. Note: Short is less then a quarter second pressed, long a full second pressed. Pressing again the power key within 5 second to toggle between IR map 1 or map 2.

3. Wait until the first key is displayed (Left), and press your "left, back" key.

4. For every command the key name is displayed, and you should press the wanted key. If you do not have (or want) such a key, press the Power or Menu key to skip this key.

5. After all commands are mapped, you are back in the normal menu, and a cuelist "IR codes" (cuelist 999) is written, but not flashed. If you want to make it permanent, use the Rec button, or do "Save LanBox Data" in LCedit+.

Additions for theatre applications:

If you turn on the manual fader (click on advanced triangle in control window) to e.g. crossfade 1sec, the "Go to the current cue" (reload, or reset), and "Go previous cue" behave different. Instead of using the cue fade time, it uses the manual fade time. This enables you to reload or go back to previous cue much faster, so that accidental Go next or intensity changes can be corrected fast but softly :-)

With firmware v2.06 you have two clocks to choose from:

1. Time (day number, and time of the day in HH, MM, SS, FF)
2. Received MTC ("day number", HH, MM, SS, FF)

Both clocks have an extra indication field for frames/sec value, it's fixed 30 f/s for time, while MTC supports 24, 25, 30, 30DF.

Both clocks can be made visible on assignable blocks of 6 light channels (global settings, DMX tab), and can also be set via the same light channels (locked MTC overrides this of course). In order to check/set the clocks we also added a Clock fixture in the generic library.

The internal clock is started at power up at time 0:00:00:00:00, but will be set to the last "saved LanBox data" when using the light channels. If NTP is working, the time will be correctly just after startup.

NTP time synchronization

The LanBox-LCX and LCE can also use a NTP server in order to sync the internal clock with a server, using the standard NTP protocol. Near any Linux or OSX computer has NTP server support, on Windows XP this service is standard not available. The LanBoxbox needs to know the IP of the NTP server, so it can be set using LCedit's global settings. Besides the NTP server IP, you also need to set your local time zone, using hhmm format. For western Europe it is +0200 in summertime, else +0100.

Note: Please use a local NTP server, as our NTP implementation does not compensate for a large latency, but more important is that a every 10 minute query can be seen as an abuse of a public NTP server!

Clock tuning
If you can't use NTP, you can still tune the internal clock to maximal accuracy with another new global setting "Clock tuning". It can be found on the DMX tab, near the clock DMX channel settings. The formula is expected seconds / actual seconds (add or substract 0.000011574 to 1.0 for a 1 sec per day correction). It's about 0.99963220 for a LanBox-LCM, 0.99970608 for a LCE, and 0.99998259 for a LCX. Note that NTP automatically calculates this tuning value.

There is a new action:
Hold until <locked> (MTC | time)
(is after | is before | transitions to before | transitions to after)
(Day Hour Minute Seconds Frame) (x = ignore)

Note: locked means that the MTC clock must be locked, or the time must be in sync with NTP server.

Example1:

```
Hold until locked MTC x:00:00:10:15
go 90.1 in layer A
go .1
```

Means: It waits until any time there is a transition to after 0 hour, 0 minutes, 10 sec, at frame 15 (so it runs a single chase/cue 90, every time at x:00:00:10:15 if the MTC source loops). The x means don't care for day number, and locked means the MTC time must be in locked situation.

Example 2:

```
Hold until time after 1:18:00:00:00
Hold until time before x:23:00:00:00
go 90.1 in layer A
Hold for 10m
go .1
```

Means: Wait until the time is after Tuesday 18:00 (so Tuesday through Sunday), but before 23:00, then run a single chase/cue 90, every 10 minutes.

Many other combinations are possible, especially when using the xx anytime. Keep in mind that transitions can not be done on 0 times (there is nothing lower then 0), and that after (or before) can be a very long time. If e.g. you only used the first hold, it keeps running from 18:00 through 00:00 from Tuesday (day 1), through Sunday (day 6); it only holds on Monday (day 0) from 00:00 through 18:00.

Example 3:

```
// Cuelist 15 (7 steps), stored 29-04-2006 11:07
001:
  go 51.1 in layer B            // 51.1 running default (e.g. all off)
  hold until time x:16:00:00:00  // at 16:00 start 100.10
  go 100.10 in layer B
  hold until time x:16:05:00:00  // at 16:05 start 100.20
  go 100.20 in layer B
  hold until time x:18:18:00:00  // at 18:18 start 101.1
  go 101.1 in layer B
  hold until time x:18:30:00:00  // at 18:30 start again 51.1
  go 001
```

Note: This runs every day, as day number is a x (don't care).