702T Menu
Navigation Basics
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The Setup Menu provides options for recording, routing, and control. The single layer menu structure allows for very quick navigation and function selection. To enter the Setup Menu press the front panel Menu button. Once in the Setup Menu, the following conventions are shared for navigating among selections and to select specific parameters.

- Menu button enters Setup Menu
- >ITEM< angle brackets note highlighted menu item
- ✔ selects highlighted item or parameter
- ▲ moves up in menu and between menu parameters
- ▼ moves down in menu and between menu parameters
- ✘ exits the selected function or Setup Menu altogether
- Stop button will exit from any menu and cancel any changes. Use it to escape out of the Setup Menu.

The right panel Rotary Switch (painted black; labeled “Select”) is a convenient control to quickly navigate among menu items and item options. Its push-to-select function duplicates the check mark in most menus.

Balance & Set Levels
Balance levels between devices:
1. On the 302 mixer, flip the tone generator switch. This sends a 1KHz tone at 0 VU.
2. Use the depressed Input Level knobs on the 702T so that this signal reads on the recorder (702T) at -20dB.
3. If you’re going to record with the shotgun mic, set phantom power ON. For the wireless mics, phantom power OFF.

Set levels on mixer & recorder:
1. White knob of the mixer should be at 0.
2. Use the depressed Gain knob of the mixer channel to set levels for each channel so that the mixer meter is hitting 0 VU (which should correspond to -20dB on the digital recorder).
3. Once you have set these base levels, use the white knob to raise or lower individual channels as needed.
4. Monitoring with headphones: Recordist MUST monitor from recorder; boom operator can monitor from mixer.

Timecode
702T
1. Navigate to menu item #41
2. Set Timecode Framerate to 23.976 for HD video
3. Set Timecode Mode to Free Run

Other 702T timecode options
- Timecode Jam: choose Jam Zeroes to reset the timecode 00:00:00.
- Choose Edit Value and set at Hour 1 for ease of collaboration with editors.
- Timecode Display Mode: can tweak how/where the timecode appears on the screen.
- Time/Date Mode: set to 12 or 24 hour clock; set date.

Denecke Sync Box
1. Open the back panel.
2. Press the white plastic button to turn it on.
3. Set clock to 48K (dip switches set to 01)
4. Rotate TC RATE with screwdriver to position #4 for 23.976 fps.
5. After settings are done, the light on the Denecke device flashes rapidly (it’s looking for timecode).
6. Connect 702T (should be sending 23.976 fps) to Denecke JAM IN with the Lemo cable (5-pin to 3.5 mm headphone plug).
7. You will see the Denecke’s light flash consistently which means it’s now synced to the 702T and can lock in the camera’s timecode.
8. Use the short BNC cable to connect Denecke to camera: Denecke TC Out to Timecode jack on camera (NOT Gen Lock).
9. Use camera menu (looks like 000 above wrench icon) to set Timecode IN: Mode > Preset > Free Run

You can test the timecode sync by framing a shot of the 702T screen. Compare the numbers on the camera screen with those on the 702T.

Press the white plastic button to turn the Denecke box OFF when shoot is done.

Remember to use slates as a backup if these timecode operations fail.
Tips from Previous Student Filmmakers

Phantom power

- YES phantom power: Sennheiser 416 shotgun mic
- NO phantom power: Sennheiser EW100 wireless mics

High-pass filters

- 80Hz is good for voices—doesn’t encroach on necessary frequencies.
- 160Hz is a bit high but may be necessary on windy days or in boomy rooms.
LISTEN! If voices sound weird when you record, the effect is permanent and you will have to re-record.

Misc.

- Don’t shoot without extra AA batteries!
- Be sure that the Denecke box is on the camera before balancing the Steadicam.
- Record Scene Name/Number on paper and take notes while recording because you WILL forget details once the shoot is over.
- 4GB Flash (CF card) should be sufficient for a day of work at 48kHz/24-bit

Basic Connection Diagram

- Sennheiser 416 shotgun mic
- K-Tek boom pole or Rycote pistol grip
- coiled XLR cable
- Sound Devices 302 Mixer
- Sound Devices 702T Recorder
- Flash Memory Card
- Headphones for recordist
- Headphones for boom op.
- IDX Battery & Cup
- Powerstar Mini Distribution