

**Part 1 : Overview of Fostex XR-7 4-tracker**

Since I was 8 years old I've been fascinated with the concept of recording sound. I was so excited to get my first tape recorder. It was a Midland with these tiny hard to handle 3 1/2 " open reels, not much more than a toy, really. It wasn't until I got a fancier 5" model that I began to experiment, adding an extra head for echo effects, putting a switch on the erase head so I could "overdub", recording on the tape inside-out for psychedelic backwards effects, pots on the capstan motor, and on & on. Cassettes were a Godsend for practicality, but equipment-wise pretty much hack proof. By then, however I was actually playing music rather than trying to manufacture it, so the cassette was a perfect no-hassle medium for taping those mom-annoying teeth grinding Sabbath-wannabe fuzz-chords that at 18 years old were just so cool to play but never sounded quite so good on playback. Hence the first rule of recording, especially a whole band : TAPES ALWAYS LIE UNLESS IT SOUNDS GOOD. It wasn't until I got my hands on a Teac Simul-Sync 4-track open reel and later the "Syncaset" rack mount cassette version that I recognized the importance of single source separation / isolation and the always underestimated crucial mix-down process. Those early attempts with the Teac yielded some very nice results that inspired me towards a home studio.

Which brings us to the basement. Many years later, and with what little earnings I could salvage from countless bar gigs, I've slapped together an extremely modest yet effective and user friendly 4-track studio that uses the Fostex XR-7 as it's heart (*see diagram #1a*). The Yamaha 4-track was my first choice but was a little pricey at the time. Now with hard disks and MD's you can pick up about *any* analog 4-tracker for under \$500. Digital is definitely the way to go, but for those of us on a tight budget it's still premature to put that Porta05 in the wife's garage sale heap.

The XR-7 is the full solenoid transport version of the XR-5, and for that reason alone is worth the price difference. Push-latch controls work fine on home decks, but are clumsy and tiring in the perpetual rewind world of song writing. The XR-7 has 6 channels, 2 with gain, parametric EQ and insert points, 4 channels with 2-band EQ only (plus the 2 FX loops and pan standard on all 6 channels). Personally, I have rarely used all 6 inputs at the same time, even for drums (I like 4 mics : 1 snare, 2 bass drums, 1 overhead). I would rather sacrifice those 2 channels and have the trim, inserts and 3-band EQ on the remaining four. Still not a bad on-board mixer (*see diagram #1b*). The deck itself has a much narrower frequency response than the mixer and not only *must* use chromium tape (I use MAXELL XLII 100's) but the heads need to be cleaned every few hours actual transport time. The Dolby NR exaggerates this and at times causes a "sweeping" effect that sounds like the tape is very slightly sliding up and down against the head. I've heard DBX is not as quirky as Dolby, but it works OK and if I turn it off the tape sounds saturated.

The recording controls take a little getting used to, since you can record direct ( input 1 to track 1, 2 to 2, etc.) or any combo on the board to an assigned track using the L/R record mode switch. It reads 1-L, 2-R, 3-L, and 4-R which makes it sound like tracks 1 & 3 only record on the left side, but when a single track is isolated there is no left or right.

All this means is if you are recording with more input channels than tracks, or you've got a buddy or two playing along, the only way to get separated tracks is to pan each input left or right respectively.

The tape head monitor setup works good, but the term "foldback" Fostex insists on using threw me right off the bat. It actually works the same as Teac's "Simul-sync" head monitor mentioned earlier, except that if you don't use the foldback feature on overdubs, every time you punch in, the track records not only the input signal but records the sound from the other three tracks as well unless you run direct (1 to 1, 2 to 2, etc.) The input and/or foldback signals are routed to the headphones, but to play both through the studio monitors you have to unplug the stereo left or right and plug it into the FB output. The track volume level and input level are controlled by a separate panpot just above the fader. To further complicate matters each channel has a switch that can run the head monitor signal through the effects loop. I've yet to find any use for this whatsoever.

One thing I found *very* useful that was not even mentioned in the manual is the ability to loop from the track outputs back to the inputs. If you need to enhance (or in my case, *salvage*) two out of four tracks, those two can be run from track 1,2,3 or 4 out and plugged into inputs 5 & 6. Switch those from L/R (bus) to INPUT, turn off the main sliders for those two tracks and you can then utilize the parametric EQ, gain and inserts for compression for those tracks. That is one reason I stated earlier I'd trade those last 2 channels for full controls on the other four. You would have full gain, EQ, effects and compression on *everything* with *no* patching or looping at mixdown. Of course, all 4-trackers have track outputs, but if all the channels are set up the same the result would be identical to running it in TAPE mode and the loop would serve no purpose unless you wanted to swap tracks for some reason. Point being, yes all units in this genre have track outputs for an external mixer, but if you have the equipment for an outboard mixdown we should be talking at least 8-track here, which is not the topic. What I look for is how much I can squeeze out of what I've got to work with. The XR-7 has inputs 5 & 6 set up as inputs or main stereo bus, allowing for parametric EQ, compression, etc. over the entire mix. I use the loops to process each track, routing them directly to the mixdown deck without any further EQ. More about this in part 3.

Although I got off *track* a bit (no pun intended), I think I've covered all the non-standard features of the XR-7. In summary I found the transport section to be smooth and accurate, the tape guides a little sloppy, the Dolby NR quirky and high biased (I don't know if this can be user-tweaked), I loved looping tracks through inputs 5 & 6 because of the full features on those two channels (Still wish it had 2 more), the head monitor (foldback) is very flexible though a little confusing at first, and the head monitor effects switches for my money just take up valuable space. If this sounds like a slam-Fostex session it's not. I really like this unit and do not regret buying it. Pound for pound it holds it own against anything else at that price.