

TASCAM

MINI STUDIO SERIES



MINISTUDIO SERIES



HOME RECORDING



PORTA 05



MIDI SYNC



PORTA ONE

PORTA TWO



LIVE RECORDING



SOUND TRACKS



THE PERSONAL SOUND-SHAPERS

There are as many ways to create with sound as there are artists and engineers. TASCAM has created the MINISTUDIO SERIES to provide creative people with convenient, versatile, high-quality tools that make the art of working with and "shaping" sound as easy, productive and enjoyable as possible—in a virtually unlimited range of applications. A MINISTUDIO functions as a musical "canvas" on which you can record, modify, and build upon sounds until your "sonic image" is perfect. And since they are compact, fully integrated recording systems, you can create almost anywhere, at any time. And now, in addition to the original MINISTUDIO series, TASCAM offers the high-speed PORTA TWO HS and PORTA 05 HS. These "HS" models run at double the normal cassette tape speed, giving up compatibility with standard cassettes while providing a stunning improvement in sound quality. TASCAM quality is relied on by professionals in all branches of music and sound production, and the MINISTUDIO SERIES is no exception. Each model in the series is designed and constructed to the same uncompromising TASCAM quality standard. A TASCAM MINISTUDIO is an invaluable adjunct to your creative talent.

TASCAM Mini-multitrack is the Key to Creative Control in Your Recording Application

Home Recording

Multitrack recording makes the creation, refinement and presentation of original music both easy and enjoyable. There's simply no better way to try out new musical ideas and arrangements, take down "musical notes" for later development, or put together a demo tape of your latest musical masterpiece. You can start with a single track — a melody line or rhythm accompaniment part — then add parts one a time to create exactly the texture and feel you want. You're not limited by studio schedules or budgets. Relax, take your time, and create the sound you really want with your own personal MINISTUDIO.

Live Recording

If you're in or working with a band, a MINISTUDIO is the perfect way to record demos or live performances. Why? Because it gives you a versatile mixer in addition to the recorder so you can record multiple sources, adding EQ and effects to create a really polished sound. Because a MINISTUDIO is so compact and portable, and because it integrates just about everything you need for versatile recording, you can make high quality live recordings at home, at clubs, at parties, outdoors — literally anywhere.

MIDI Sync Recording

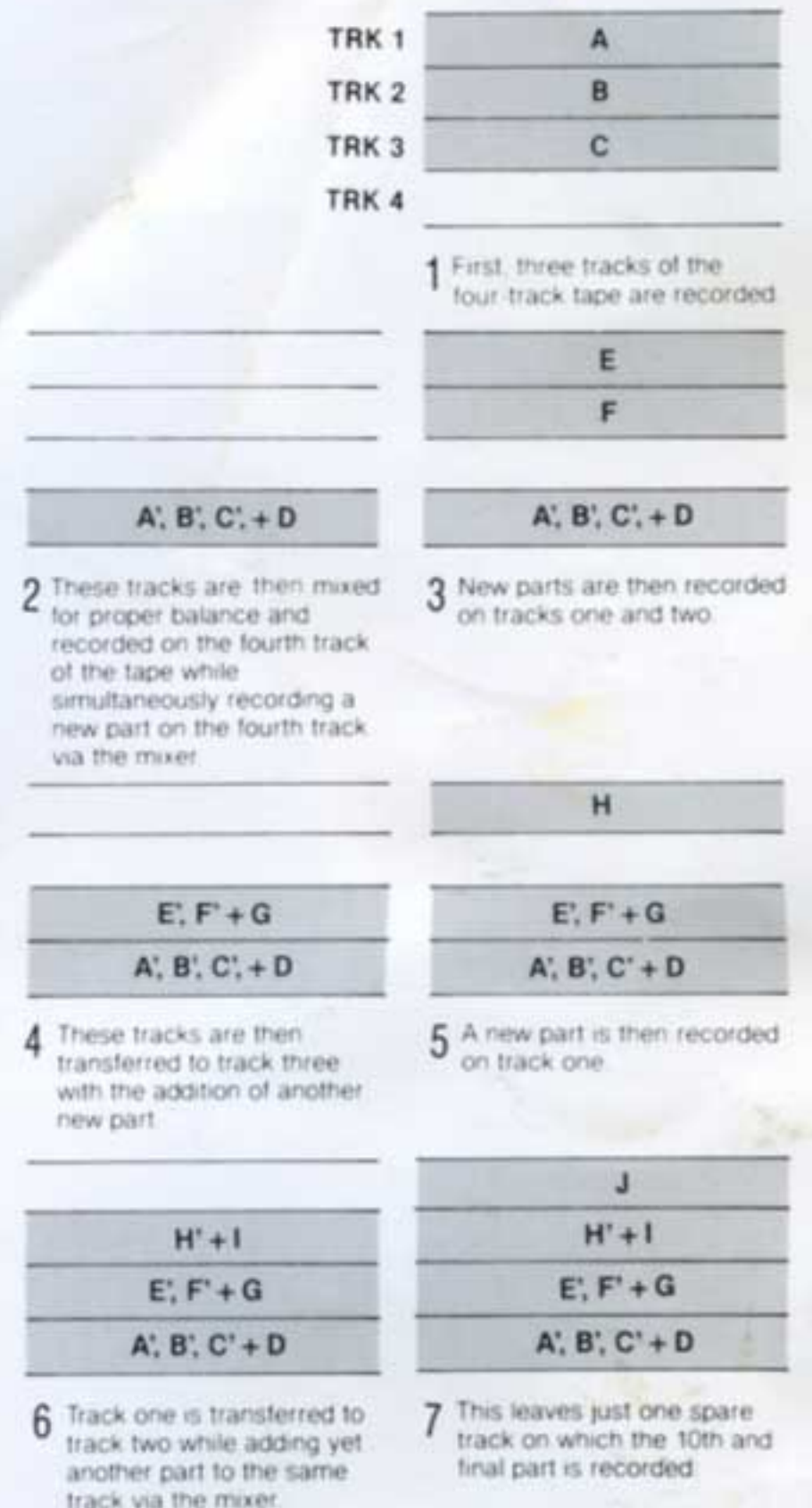
MIDI — the Musical Instrument Digital Interface — has revolutionized the art of music and sound production. The PORTA 05 and PORTA TWO incorporate special sync terminals and an internal data filter for easy, error-free synchronization of sophisticated MIDI music equipment to tape. This allows you to combine contemporary electronic or sampled sound with acoustic sources recorded on tape, vastly expanding the scope of both the multitrack recording medium and MIDI-based sound production.

Sound Track Production

Home videos, slide shows and other audio/visual presentations can be greatly enhanced by a professional-quality sound track. A TASCAM MINISTUDIO makes great sound for your A/V productions easy to create. Combine pre-recorded music with narration, create and mix original sound effects — all with the vast flexibility and signal processing power that any TASCAM MINISTUDIO provides.

"Bouncing" or "Collapsing" Tracks

Here's an example of how you can record up to 10 individual parts on the 4 tracks provided by the MINISTUDIO recorder, without re-recording any track more than once. By systematically mixing and transferring parts from recorded tracks onto spare tracks, you open up tracks for further recording.



Each channel of the PORTA ONE's four-input mixer can accept a microphone, line or instrument source. Microphone input capability on all channels makes the PORTA ONE an excellent choice if you will be recording primarily from acoustic rather than line sources. Further, a two-band equalizer is provided on each input channel so the sound of each source can be individually tailored to create the best overall mix when the tracks are combined. Of course, the individual channel EQ controls can be used during recording, overdubbing and mixdown, so you have full control at all stages of the music production process.

The channel pan pots make it possible to assign the channel signal anywhere between tracks during recording and anywhere in the stereo sound field during mixdown. A system of record function switches can be used in conjunction with the pan pots to assign each input to any of the four recorder tracks when recording. You can even assign all inputs to a single track if

necessary.

The PORTA ONE recorder section, like all others in the MINISTUDIO SERIES, features dbx noise reduction to help you achieve a clean, professional sound. The recorder runs at the standard cassette speed so you can actually record tapes that can be played back on a standard cassette deck, or play tapes that were originally recorded on a standard cassette deck.

The PORTA ONE makes monitoring versatile and convenient with a cue system that allows mixing all four recorder tracks plus live inputs to an independently controllable headphone output so you can hear everything you need while recording or overdubbing. Accurate visual monitoring of signal levels is provided by four VU meters.

Other features offered by the PORTA ONE include four independent tape output jacks that make it possible to directly transfer tracks to larger-format tape machines, a variable pitch control so that recorded material can

be "tuned" to live sources, and a tape counter with a zero return function for fast, easy cueing.

The PORTA ONE can be powered either from batteries loaded into its internal battery compartment — ideal for field or "on-the-road" recording — or an optional AC adaptor (PS-P1).

THE PROVEN STANDARD OF MINISTUDIO PERFORMANCE

PORTA ONE

MINI STUDIO



The TASCAM PORTA 05 has been designed specifically to make multitrack recording as easy and as affordable as possible without compromising on performance or features. It's the most compact and lightweight model of its type, and unquestionably the finest in its class. The mixer section is a 4-channel design that offers plenty of versatility for both recording and playback. All four channels accept line-level input from electronic instruments, while channels 1 and 2 also have trim controls and accept microphones or direct input from electric instruments such as guitars. A 2-channel 2-band equalizer is provided on the stereo buss for tonal adjustment during both recording and mixdown. Since external signal processing is an important adjunct to creative recording, the PORTA 05 lets you hook up virtually any type of external effect device to its effect send/receive loop — it's the only model in this class that offers this capability. Of course, you can use effects during both recording and mixdown for maximum sig-

nal processing versatility.

The recorder section has been designed to deliver the highest possible sound quality, and features switchable dbx noise reduction so you can create clean, noise-free recordings. The recorder is also compatible with the standard stereo compact cassette format, so you can record or listen to standard stereo cassettes. Monitoring is greatly facilitated by tape cue controls for all four tracks that make it simple to set up the ideal monitor balance while recording.

The PORTA 05 permits synchronization of MIDI music equipment such as sequencers and drum machines to material recorded on tape. Simply record the MIDI/FSK sync signal on track 4 of the recorder, then feed the playback sync signal back to the MIDI device via the special SYNC OUT jack. An internal bandpass filter on the SYNC OUT line guarantees a clean sync signal to minimize data errors.

Other Features

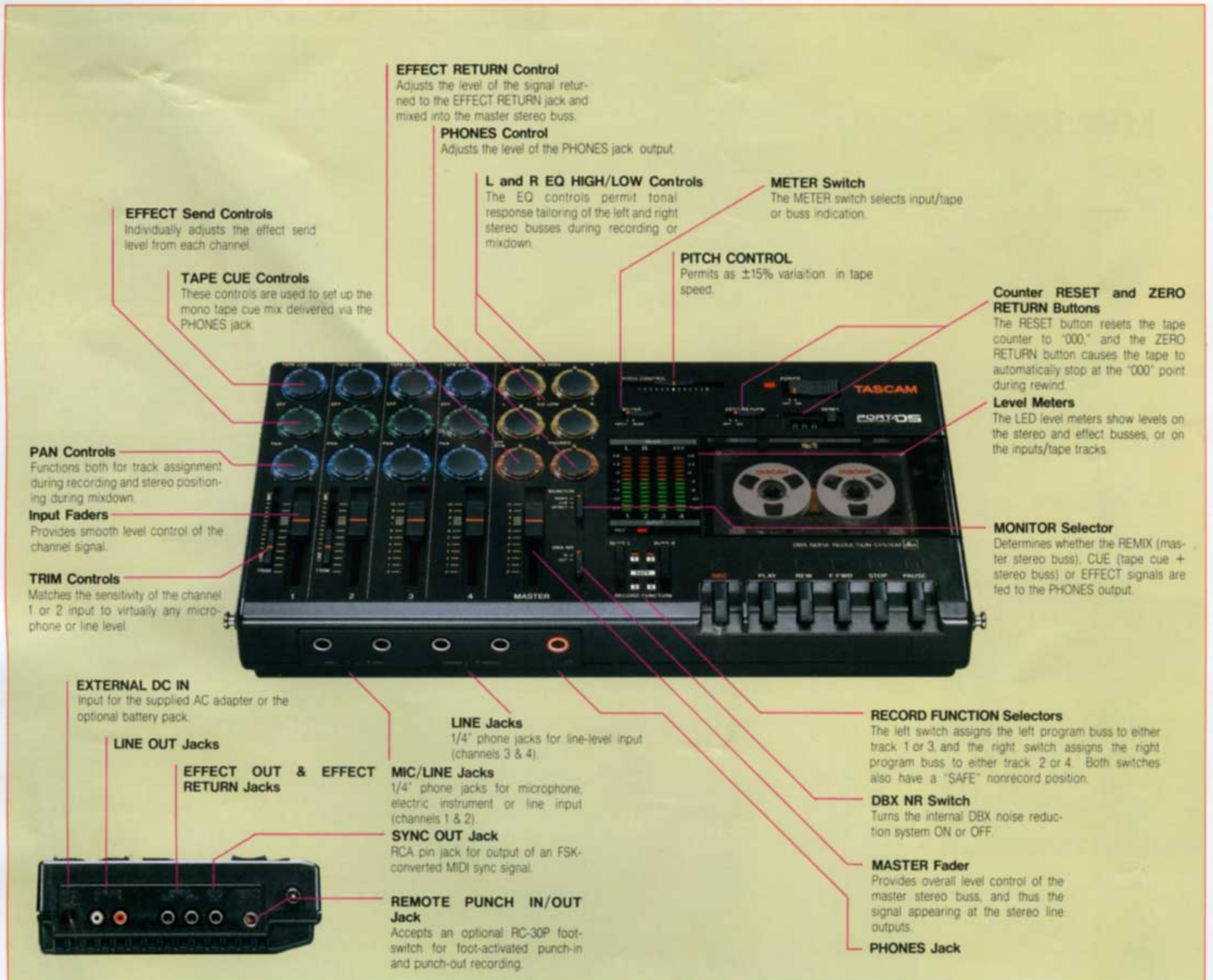
- * REMIX/CUE/EFFECT monitor selector.
- * Monitor PHONES jack with independent level control.
- * Remote punch-in/out jack accepts optional RC-30P footswitch.
- * Optional CS-P5 soft carrying case.
- * Optional BP-5 battery pack.

HS version

Here's the superior sound of high-speed operation in one of the most convenient multitrack recording systems available. The PORTA 05 HS is quite a serious production tool.

A TRULY COMPACT, CONVENIENT CREATIVE COMPANION

PORTA 05 MINISTUDIO



The PORTA TWO offers maximum mixing versatility by combining a full-function 6-channel mixer with a 4-channel multitrack cassette recorder. Each mixer channel features a two-band equalizer for fine tonal control, and a sophisticated RECORD FUNCTION selection system lets you assign the mixer's six channels to tape tracks in a number of ways. All six inputs can be fed directly to single tracks of the tape, several inputs can be mixed and recorded on a single track, or inputs can be panned across a pair of tracks. Of course, you can record all four tracks simultaneously.

The PORTA TWO has a separate effect buss with EFFECT send controls on each input channel and an EFFECT MASTER level control which can be used to drive an external reverb unit or other effect unit. The effect signal can be returned to one or both of the stereo effect return jacks, and mixed into the master stereo signal using the EFFECT RETURN control. A mono TAPE CUE mix output is also provided, with

individual level controls for each track of the tape. In addition to monitoring recorded tracks while recording new material via the mixer, the tape cue mix can greatly expand effect-handling capability by functioning as a second effects send mix during mixdown. INSERT patch points are also provided on mixer input channels 1 and 2, so you can insert compressors, equalizers or other signal processing equipment for recording or mixdown. For extra convenience when synchronizing MIDI sequencers or drum machines to tape, the PORTA TWO features special SYNC IN and OUT terminals. Pressing the SYNC switch instantly assigns the SYNC IN terminal to track 4 of the tape while SYNC OUT is always available, eliminating the need for repatching. A SYNC OUT level control is provided for optimum level matching with your MIDI equipment, and a special data filter minimizes data errors.

To give you extra-clean recording with remarkable dynamic range, the PORTA TWO features a built-in DBX

noise reduction system. Of course, the PORTA TWO runs from an AC adapter or internal batteries, so you can create anywhere.

Other Features

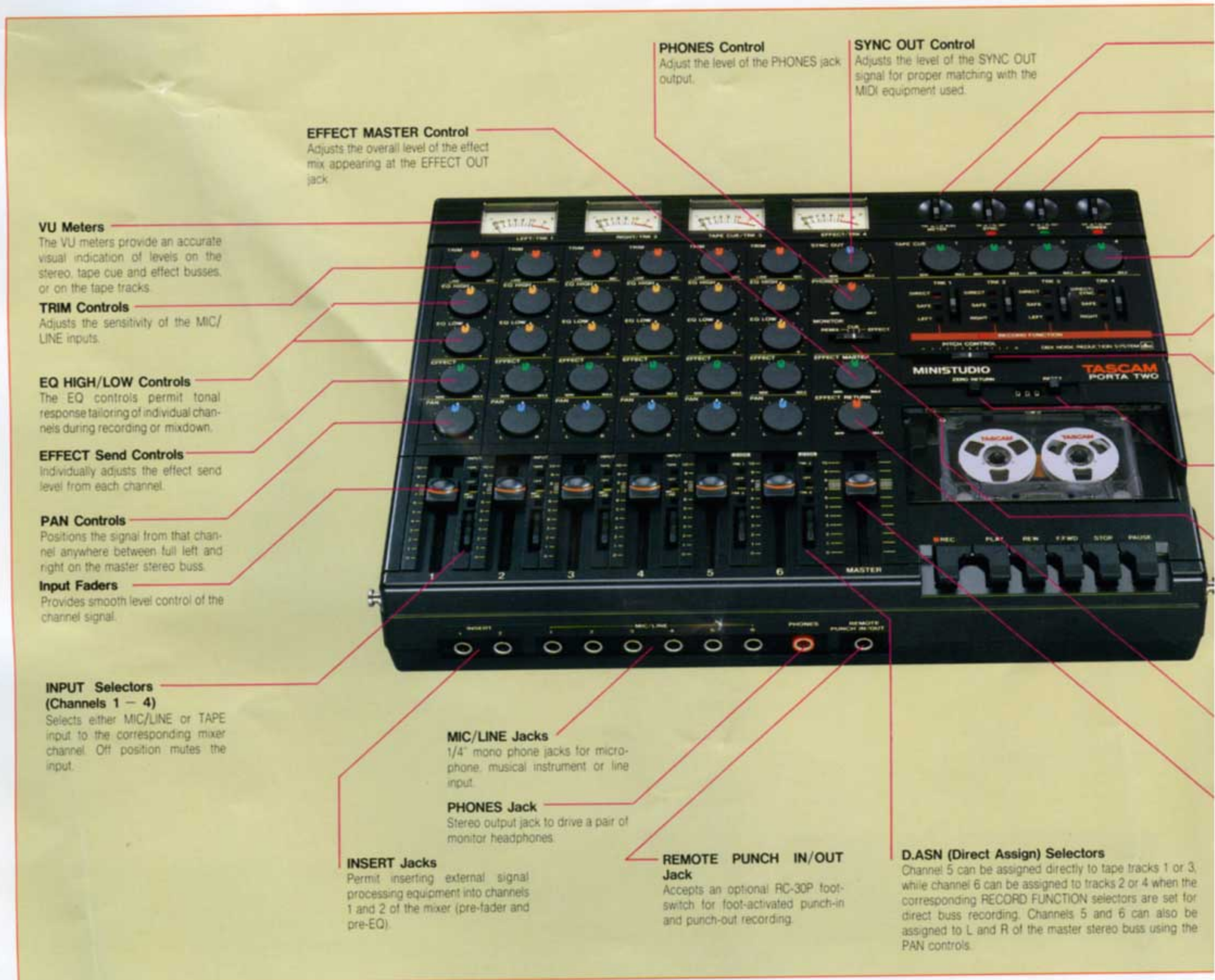
- *Independent line-level outputs from each tape track.
- *Stereo monitor PHONES jack with level control.
- *±15% pitch control.
- *Blank spaces provided above the channel ladders for labelling.

HS version

Running at 9.5 cm/sec.—double the normal cassette tape speed—the "HS" version of the PORTA TWO offers a significant advantage in terms of sound quality.

MAXIMUM INPUT/OUTPUT CAPACITY — TOP OF THE MINISTUDIO SERIES

MINISTUDIO PORTA TWO



PHONES Control

Adjust the level of the PHONES jack output.

SYNC OUT Control

Adjusts the level of the SYNC OUT signal for proper matching with the MIDI equipment used.

EFFECT MASTER Control

Adjusts the overall level of the effect mix appearing at the EFFECT OUT jack.

VU Meters

The VU meters provide an accurate visual indication of levels on the stereo, tape cue and effect busses, or on the tape tracks.

TRIM Controls

Adjusts the sensitivity of the MIC/LINE inputs.

EQ HIGH/LOW Controls

The EQ controls permit tonal response tailoring of individual channels during recording or mixdown.

EFFECT Send Controls

Individually adjusts the effect send level from each channel.

PAN Controls

Positions the signal from that channel anywhere between full left and right on the master stereo buss.

Input Faders

Provides smooth level control of the channel signal.

INPUT Selectors (Channels 1 - 4)

Selects either MIC/LINE or TAPE input to the corresponding mixer channel. Off position mutes the input.

MIC/LINE Jacks

1/4" mono phone jacks for microphone, musical instrument or line input.

PHONES Jack

Stereo output jack to drive a pair of monitor headphones.

INSERT Jacks

Permit inserting external signal processing equipment into channels 1 and 2 of the mixer (pre-fader and pre-EQ).

REMOTE PUNCH IN/OUT Jack

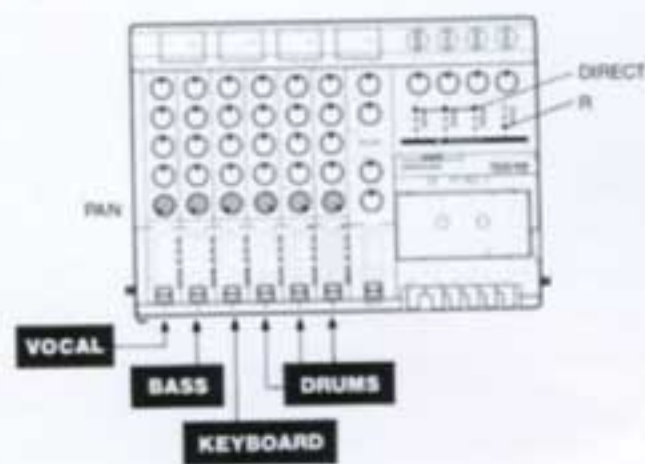
Accepts an optional RC-30P foot-switch for foot-activated punch-in and punch-out recording.

D.ASN (Direct Assign) Selectors

Channel 5 can be assigned directly to tape tracks 1 or 3, while channel 6 can be assigned to tracks 2 or 4 when the corresponding RECORD FUNCTION selectors are set for direct buss recording. Channels 5 and 6 can also be assigned to L and R of the master stereo buss using the PAN controls.

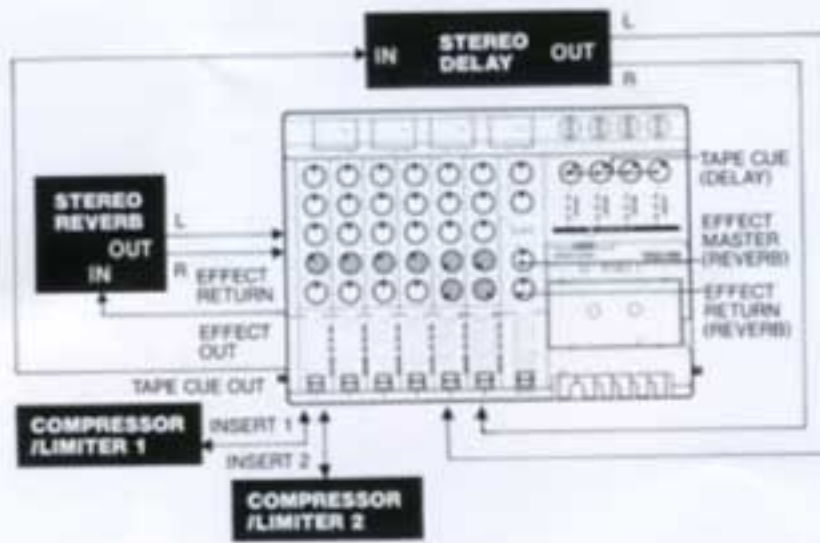
SIMULTANEOUS 4-CHANNEL RECORDING

The PORTA TWO's ability to record all four tracks simultaneously makes it ideal for recording small-band rehearsals and live performances. You could, for example, set all four RECORD FUNCTION selectors for direct buss recording, and assign mixer channels 5 and 6 to tracks 3 and 4, respectively. This way, mixer channels 1 and 2 are directed to tape tracks 1 and 2, while channels 3 and 5 are mixed and fed to track 3, and channels 4 and 6 are mixed and fed to track 4.



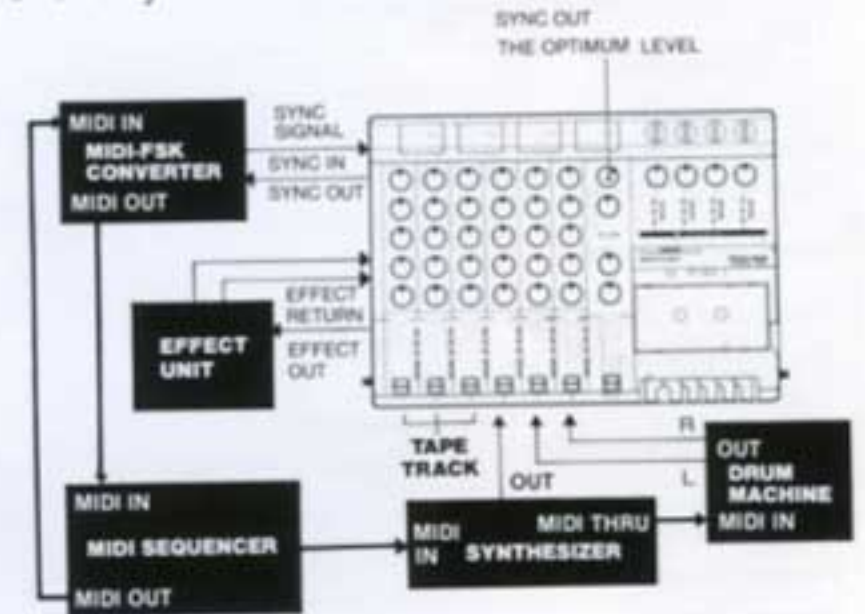
EXTERNAL SIGNAL PROCESSING

This system demonstrates the PORTA TWO's considerable effects handling capability. Since reverb is essential for virtually all types of recording, the main PORTA TWO effect send/return loop will generally be dedicated to this "ambience-creating" effect. Compressor/limiters — or a stereo compressor/limiter — can be inserted in channels 1 and 2 using the INSERT 1 and INSERT 2 patch points. During mixdown the TAPE CUE output can be used as another effect send, driving, for example, a digital delay unit. The output (or stereo outputs) can be returned to mixer channel 5 and/or 6, and mixed in with the program as desired.



MIDI SYNCHRONIZATION

In this system the PORTA TWO SYNC facility is used for synchronization of a MIDI sequencer, synthesizer and drum machine. The Sync signal recorded on track 4 synchronizes the sequencer which drives a MIDI synthesizer and a MIDI drum machine. Tracks 1 through 3 can be recorded with other parts while monitoring the synchronized MIDI playback. Sequenced parts can be modified at any time simply by editing the sequencer or drum machine data. You could, for example, start recording with a simple guide drum part, then program in drum breaks and flourishes as the piece begins to take shape. Of course, you're also free to experiment with different voices on the synthesizer to determine the best one for your musical creation.



METER Switch

The METER switch selects BUSS or TRACK indication.

DBX NR Switch

Turns the internal DBX noise reduction system ON or OFF.

TAPE CUE Controls

These controls are used to set up the mono tape cue mix delivered via the TAPE CUE OUT jack.

RECORD FUNCTION Selectors

Select individual tape tracks for direct buss recording or master stereo buss recording via the PAN controls, or set the RECORD SAFE mode preventing accidental recording over important material.

PITCH CONTROL

Permits a $\pm 15\%$ variation in tape speed.

Counter RESET and ZERO RETURN Buttons

The RESET button resets the tape counter to "000," and the ZERO RETURN button causes the tape to automatically stop at the "000" point during rewind.

MONITOR Selector

Determines whether the REMIX (master stereo buss), CUE (tape cue + stereo buss) or EFFECT signals are fed to the PHONES output.

EFFECT RETURN Control

Adjusts the level of the signal returned to the EFFECT RETURN jacks and mixed into the master stereo buss.

MASTER Fader

Provides overall level control of the master stereo buss, and thus the signal appearing at the stereo line outputs.

SYNC Switch

When ON the SYNC IN jack signal is directed to track 4 of the tape. The SYNC OUT signal is always available. When OFF track 4 is accessible for recording via the mixer section.

EXTERNAL DC IN

Input for the supplied AC adaptor.

L and R LINE OUT Jacks

Left and right channel line-level output from the master buss.

TAPE OUT Jacks

Direct RCA pin jack outputs from the four tape tracks.

SYNC IN and OUT Jacks

RCA pin jacks for input and output of an FSK-converted MIDI sync signal. The SYNC IN and OUT jacks are assigned to track 4 of the tape when the SYNC switch is ON.



TAPE CUE OUT Jack

1/4" mono phone jack output from the TAPE CUE mix.

EFFECT OUT Jack

1/4" mono phone jack output from the EFFECT buss.

L/MONO and R EFFECT RETURN Jacks

Output from stereo effect devices can be plugged into both the L/MONO and R EFFECT RETURN jacks. Mono signals plugged into the L/MONO jack are returned to both the left and right channels of the master stereo buss.

SPECIFICATIONS

	PORTA TWO # 950	PORTA ONE # 650	PORTA 05 # 499 2157 PR.
INPUT/OUTPUT			
Mic/Line Input	50 kohms/-50dBV~-10dBV	50 kohms/-50dBV~-10dBV	50 kohms/-50dBV~-10dBV
Line Input	—	—	5 kohms/-10dBV
Insert	100 ohms/-10dBV	—	—
	50 kohms/-10dBV	—	—
Effect Return	10 kohms/-10dBV	—	5 kohms/-10dBV
Line Output	100 ohms/-10dBV	1 kohms/-10dBV	100 ohms/-10dBV
Effect Output	100 ohms/-10dBV	—	100 ohms/-10dBV
Tape Cue Output	150 ohms/-10dBV	—	—
Tape Out	150 ohms/-10dBV	1 kohms/-10dBV	—
Sync Input	10 kohms/-10dBV	—	—
Sync Output	100 ohms/-10dBV	—	100 ohms/-10dBV
Headphone Output	100mW + 100mW max (8 ohms)	100mW + 100mW max (8 ohms)	100mW + 100mW max (8 ohms)
RECORDER			
Tape	Compact Cassette, 70µs. Hi-bias (Type II) tape		
Track Format	4-track, 4-channel		
Tape Speed	4.8cm/s (1-7/8 ips) 9.5 cm/s (3-3/4 ips)		
Pitch Control	±15% ±12%		
Fast Wind Time	Approx. 100sec for C-60		
Wow and Flutter	0.05% (WRMS) 0.04% (WRMS) ±0.1% peak (weighted) ±0.1% peak (weighted)		
Frequency Response	40Hz-12.5kHz, ±3dB (dbx OUT) 40Hz-16kHz ±3dB (dbx OUT)		
Signal-to-Noise Ratio	85dB (IHF "A" WTD) (dbx IN, Referenced to 3% THD)		
Total Harmonic Distortion	1.0% (1kHz, 0VU, dbx IN)		
Channel Separation	55dB (1kHz, 0VU, dbx IN)		
Erasure	70dB at 1 kHz		
GENERAL			
Power Requirements	11-15V DC 400mA		
Power Supply			
	AC Adaptor	PS-P2 (Supplied)	PS-P1 (Option)
	Battery	Sum-2, "C" Size, R14 or equivalent X 10	
Battery Life (Alkaline)	More than 8 hours, continuous 2-channel recording with dbx nominal input level, headphone output 10mW + 10mW		
Dimensions (W×H×D)	410×68×299mm (16-1/8"×2-11/16"×11-3/4")	330×70×250mm (13"×2-3/4"×9-13/16")	360×60×182mm (14-3/16"×2-3/8"×7-3/16")
Weight (net)	3.5kg (without batteries) (7.7 lbs)	3.0kg (without batteries) (6.6 lbs)	2.0kg (4.4 lbs)

- * In these specifications, 0dBV is referenced to 1.0 Volt rms.
- * Changes in specifications and features may be made without notice or obligation.
- * dbx is a registered trademark of dbx incorporated.
- * Specifications for the HS (High Speed) versions of the PORTA TWO and PORTA 05 are printed in blue.

ACCESSORIES



Soft Carrying Bags
CS-P5 (for PORTA 05)
CS-P1 (for PORTA ONE)
CS-P2 (for PORTA TWO)



Punch In/Out Footswitch
RC-30P



Plug Adaptor
JC-T201
RCA phono jack
↓
Mono phone plug



Mic Input Transformer
109B
Balanced XLR Female
↓
Unbalanced phone plug



Insertion Cable
PW-2Y (2m)
PW-4Y (4m)
Stereo phone plug
↓ Mono phone plug
↓ Mono phone plug



MIDI TAPE SYNCHRONIZER
MTS-30

The MTS-30 is capable of synchronizing MIDI equipment to tape from any specified measure number. By selecting the appropriate time signature, it can also be made to display the current measure number on a large LED display. Advanced and extremely powerful error-correction capability has also been incorporated to prevent errors and loss of synchronization that can interfere with the creative process.