YAMAHA
TG100
TONE GENERATOR

Yamaha's TG100 — the High Quality General MIDI Sound Module

Calling the TG100 just a tone generator is really a half truth. With 192 instrument voices, 10 drum kits, 28 note polyphony, 16 part multitimbrality and digital reverb the TG100 is an excellent tone generator. However, two features that make the TG100 more than just a tone generator are conformity with General MIDI and a "TO HOST" computer connection.

General MIDI is a recent addition to the MIDI 1.0 specification. Like existing MIDI specifications, General MIDI provides greater compatibility for MIDI song files when they are played on different MIDI equipment.

The "TO HOST" connection allows direct connection to a computer without a MIDI interface.

Whether you're building your first MIDI music production system, a "home studio", or looking to increase the sound library of an existing system the TG100 is the perfect choice.

■ **AWM (Advanced Wave Memory) sound sampling technology.**
■ **192 instrument voices and 10 drum kits.**
■ **16 part multitimbrality.**
■ **28 note polyphony (Dynamic Voice Allocation).**
■ **DSP (Digital Signal Processor) for digital reverb effects.**
■ **Host computer connection allows direct connection to a computer, without a MIDI interface.**
■ **External sound sources can be mixed with the TG100's sounds, using the stereo AUDIO IN facility, which provides an input level control and signal level peak indicator.**
■ **Conforms to General MIDI Level 1, allowing playback of MIDI songs recorded on other General MIDI equipment.**
■ **Compatible with Yamaha's "Disk Orchestra Collection" range of music software.**
■ **Comprehensive MIDI implementation for external control via MIDI software and data transfer.**

Instrument Voices and Drum Kits

Instrument voices and drum sounds are produced using AWM (Advanced Wave Memory). AWM is a proven technique developed by Yamaha for digitally sampling and reproducing natural sound.

192 voices - a comprehensive selection of acoustic and electronic instruments, plus special effects. Well, that's what you expect from a tone generator. What makes the TG100 different is the way that each voice has been carefully conceived. 192 voices - all of which will prove useful in your compositions. 10 drum kits - acoustic drum sounds, percussion, some analog sounds, plus a few surprises.

Like the instrument voices, each drum sound has been carefully conceived making them all very usable. The professional sound quality of the TG100 drum sounds rivals that of a high-quality dedicated drum machine.

16 part Multitimbral, 28 note Polyphony for MIDI sequencing

The TG100 is ideally suited to work with a MIDI sequencer. It has 16 part multitimbrality, which means that up to 15 different instrument voices and 1 drum kit can be played simultaneously. First, a voice is selected for each part, then each part is assigned to receive MIDI data on one of the 16 MIDI channels. MIDI data for each part is then recorded and played back on the individual tracks of a MIDI sequencer. In effect the MIDI sequencer works like a multitrack tape recorder, except that MIDI data not audio data is recorded.

As well as voice selection, the following parameters can be set independently for each part: Volume, pan, attack-time, release-time, and reverb level.

28 note polyphony means that there are enough notes available for the 16 parts in your complex and demanding compositions. Notes are divided among the 16 parts using a technique called DVA (Dynamic Voice Allocation). DVA ensures that notes are automatically allocated to parts as and when they are required.

Voice Library Expansion for the Keyboardist

A comprehensive selection of high quality voices makes the TG100 ideal for the keyboard player who wants to increase his voice library. By assigning a number of parts to the same MIDI channel, voices can be played in parallel. This allows you to create original, complex voices, a technique known as voice "layering".

General MIDI

The TG100 conforms to the new General MIDI, which provides greater compatibility for MIDI song files. If a MIDI song file that was recorded using the TG100 is played on a different MIDI tone generator, so long as that tone generator conforms to General MIDI, the assignment of voices to parts will be correct. For example, what was a grand piano on the TG100, will be a grand piano on any General MIDI tone generator (General MIDI is the only industry standard related to sound compatibility).

Built-in Computer/MIDI Interface

A dedicated TO HOST computer connection allows direct connection to a personal computer that does not have a MIDI interface. In fact, with this connection the TG100 works

as a MIDI interface, as well as a tone generator, with your other MIDI instruments connected to your computer via the TG100. Of course, it also has the standard MIDI IN, OUT and THRU connections so it can be connected to a computer with a MIDI interface. But, for computers that do not have a built-in MIDI interface, the TG100 eliminates the need for a MIDI interface.

Using this connection, the TG100 can be connected directly to the following computers: Apple® Macintosh; IBM® PC/AT™ and PS/2™. Computers with a built-in MIDI interface, such as the Atari® ST, can be connected using the TG100's MIDI connections.

NOTE: The TG100 is compatible with most of Macintosh music software. For IBM® music software, please make sure it is compatible with the TG100.
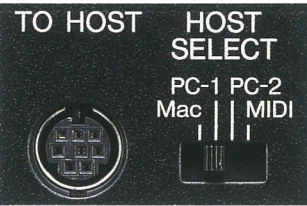
Digital Reverb and Stereo Outputs

Digital reverb and delay effects are provided by one of Yamaha's custom DSP chips (Digital Signal Processor). Reverb simulation of large and medium size concert halls and large and hardwalled rooms are provided. Also, two plate type reverb programs and two reverb and delay combinations. Stereo outputs produce a realistic, rich reverb effect. Individual parts can be panned between each output allowing precise instrument positioning in the stereo sound field.

Voice Editing

Easy editing can be performed on the 64 voices in the internal voice bank allowing you to create your own original voices. Edit parameters include: volume, detune and pan. Individual editing of each element in a two element voice allows you to create subtle detune chorus type effects, or new exciting voices radically different from the original preset voices.

Audio In facility

An external stereo sound source can be mixed with the TG100's sounds, using the AUDIO IN facility, which provides an input level control and signal level peak indicator.

Compatibility

It's fair to say that we live in a world of incompatible technologies. However, putting the needs of the musician first, the TG100 makes ease of MIDI data transfer between different systems a reality. As well as conforming to the General MIDI, the TG100 is compatible with Yamaha's "Disk Orchestra Collection" range of music software. The Disk Orchestra Collection is a series of music titles made by Yamaha, which are available on floppy disk, primarily designed for use with Yamaha's Clavinova family of instruments.

Front Panel

Rear Panel
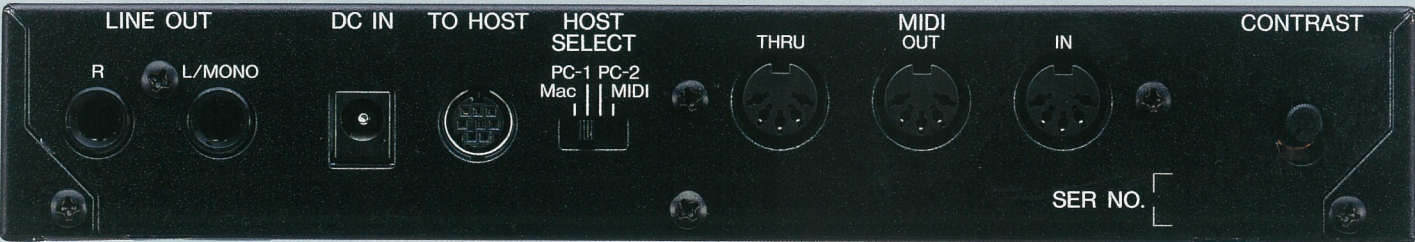
System examples

TG100 Voice List

General MIDI Voices								Other Voices			
1	Acoustic Grand Piano	33	Acoustic Bass	65	Soprano Sax	97	SFX 1 (rain)	129	SynHarmo	161	Slap Bass 9
2	Bright Acoustic Piano	34	Electric Bass fingered	66	Alto Sax	98	SFX 2 (soundtrack)	130	SynWarm	162	Electric Bass fingered 2
3	Electric Grand Piano	35	Electric Bass picked	67	Tenor Sax	99	SFX 3 (crystal)	131	SynFunny	163	Electric Bass picked 2
4	Honky-tonk Piano	36	Fretless Bass	68	Baritone Sax	100	SFX 4 (atmosphere)	132	SynEcho1	164	Choir Aah 2
5	Rhodes Piano	37	Slap Bass 1	69	Oboe	101	SFX 5 (brightness)	133	SynOboe	165	Choir Aah 3
6	Chorused Piano	38	Slap Bass 2	70	English Horn	102	SFX 6 (goblins)	134	SynEcho2	166	Choir Aah 4
7	Harpsichord	39	Synth Bass 1	71	Bassoon	103	SFX 7 (echoes)	135	SynSolo	167	String Ensemble 3
8	Clavinet	40	Synth Bass 2	72	Clarinet	104	SFX 8 (sci-fi)	136	SynRdOrg	168	Percussive Organ 2
								137	SynBell	169	Brass section 2
9	Celesta1	41	Violin	73	Piccolo	105	Sitar	138	MalletSy	170	Electric Piano DX
10	Glockenspiel	42	Viola	74	Flute	106	Banjo	139	MalletWin	171	Synth Piano
11	Music Box	43	Cello	75	Recorder	107	Shamisen	140	Sho	172	Celesta 2
12	Vibraphone	44	Contrabass	76	Pan Flute	108	Koto	141	Breathy	173	Clavinova tone
13	Marimba	45	Tremolo Strings	77	Bottle Blow	109	Kalimba	142	DeepSnar	174	Jazz Organ
14	Xylophone	46	Pizzicato Strings	78	Shakuhachi	110	Bag pipe	143	Syn Tom2	175	Combo Organ
15	Tubular Bells	47	Orchestral Harp	79	Whistle	111	Fiddle	144	TaikoRim	176	Pipe Organ
16	Dulcimer	48	Timpani 1	80	Ocarina	112	Shanai	145	Cymbal	177	Slap Bass 10
								146	Castanet	178	Brass section 3
17	Hammond Organ	49	String Ensemble 1	81	Lead 1 (square)	113	Tinkle Bell	147	Triangle	179	Pop Brass
18	Percussive Organ	50	String Ensemble 2	82	Lead 2 (saw tooth)	114	Agogo	148	Bird	180	Synth Brass 3
19	Rock Organ	51	Synth Strings 1	83	Lead 3 (calliope)	115	Steel Drums	149	Jam	181	Saxophone 1
20	Church Organ	52	Synth Strings 2	84	Lead 4 (chiff)	116	Woodblock	150	EfctWatr	182	Saxophone 2
21	Reed Organ	53	Choir Aahs	85	Lead 5 (charang)	117	Taiko Drum	151	EfctJngl	183	Synth crystal
22	Accordion	54	Voice Oohs	86	Lead 6 (voice)	118	Melodic Tom	152	Acoustic Steel guitar 2	184	Synth Wood
23	Harmonica	55	Synth Voice	87	Lead 7 (fifths)	119	Synth Drum	153	Electric muted guitar 2	185	String Ensemble 4
24	Tango Accordion	56	Orchestral Hit	88	Lead 8 (bass + lead)	120	Reverse cymbal	154	Electric muted guitar 3	186	Synth Strings 3
								155	Slap Bass 3	187	Synth choir 2
25	Acoustic Nylon Guitar	57	Trumpet	89	Pad 1 (new age)	121	Guitar Fret Noise	156	Slap Bass 4	188	Flute 2
26	Acoustic Steel Guitar	58	Trombone	90	Pad 2 (warm)	122	Breath Noise	157	Slap Bass 5	189	Acoustic Grand piano 2
27	Electric Jazz Guitar	59	Tuba	91	Pad 3 (polysynth)	123	Seashore	158	Slap Bass 6	190	Bright Acoustic piano 2
28	Electric Clean Guitar	60	Muted Trumpet	92	Pad 4 (choir)	124	Bird Tweet	159	Slap Bass 7	191	Timpani 2
29	Electric muted Guitar	61	French Horn	93	Pad 5 (bowed)	125	Telephone Ring	160	Slap Bass 8	192	Electric bass Heavy
30	Overdriven Guitar	62	Brass Section	94	Pad 6 (metallic)	126	Helicopter				
31	Distortion Guitar	63	Synth Brass 1	95	Pad 7 (halo)	127	Applause				
32	Guitar Harmonics	64	Synth Brass 2	96	Pad 8 (sweep)	128	Gun Shot				

Drum Kits

Standard (Jazz)	Power	Analog	Orchestra	RX
Room	Electronic	Brush	Clavinova	C/M

Specifications

Preset (ROM) voices	192 instrument voices and 10 drum kits
Internal (RAM) voices	64 user voices
Polyphony	28-note (Dynamic Voice Allocation)
Multi-timbral	16 voices simultaneous (max) (Dynamic Voice Allocation)
Sound sampling	AWM (Advanced Wave Memory)
Reverb effect	Yamaha custom DSP (Digital Signal Processor)
Sound module mode	General MIDI LEVEL1 / Disk Orchestra (Yamaha)
Demo song	1 (not editable, stored in ROM)
Controls	MASTER VOLUME, INPUT, CONTRAST
Buttons	PLAY, PART, EDIT, CURSOR, − 1/NO, + 1/YES
Indicators	PEAK
LCD display	1-line 16-character
Audio conections	LINE OUT 1/4" (6.35mm) mono jack × 2 (L/MONO & R) / AUDIO IN 3.5mm stereo mini jack × 1 / PHONES 3.5mm stereo mini jack × 1
MIDI connections	IN, OUT THRU (5-PIN DIN socket)
TO HOST connection	8-PIN mini DIN socket
Host computer selection and data transfer rate	MIDI - 31,250 bps (bits per second) / Mac - 31,250 bps / PC - 1 - 31,250 bps (for NEC PC9800 series) / PC - 2 - 38,400 bps (for IBM PC/AT and PS/2)
DC IN connection	2.1mm mini power type (for use with PA-1505 adaptor)
Power supply voltage	15V, 500mA
Dimensions (W × D × H)	220 × 196.5 × 40.6mm (8-5/8" × 7-3/4" × 1-5/8")
Weight	1.0kg (2 lbs 3 oz)
Supplled accessories	PA-1505 power supply adaptor
Optional accessories	RK 101 19" rack mounting adaptor

All specifications subject to change without notice.

For details please contact:

MDF2 MIDI Data Filer

The Yamaha MDF2 MIDI Data Filer provides convenient MIDI data storage for the TG100, ideal for saving your edited voices for future use.
The MDF2 also provides real-time MIDI data recording and playback.

YAMAHA

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