

WT11 Secret Mode

By Art Whitfield & Mardou Case

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Introduction

"WT11 Secret Mode" is a way to allow front-panel performance and voice editing of the synth patches in the Yamaha WT11 Synthesizer module. The material presented here is based on personal experience with the WT11 unit, and is intended for experienced FM synth programmers. The synth engine used in the WT11 is common to that used in the TX81Z synthesizer, so programming details can be found in the TX81Z manual and popular books on the subject of FM synth programming. The authors wish to thank the internet *Windlist* and Guy Zumpetta for initial information on the WT11 Secret Mode. This was originally published in 1999 for IWSA, and updated in 2007 by the authors and republished by WindWorks Design. All rights reserved by the authors.

General Procedure

The WT11 can be placed in Secret Mode by pressing and holding DATA ENTRY+1 and EFFECT buttons while powering up the synth. Once the WT11 is in Secret Mode, three available sub-modes are available to be selected:

- Performance Edit Mode – Simultaneously press EFFECT and EDIT
- Voice Edit Mode – Simultaneously press EFFECT and PLAY
- Test Mode – Simultaneously press EFFECT and STORE

Once you are in Voice Edit, Performance Edit, or Test Secret Modes, additional edit functions or control selections are accessible using the following keys:

- BANK/PARAM: Go up one level.
- EFFECT BALANCE -1/+1: Move through available parameters.
- DATA ENTRY -1/+1: Change numerical value of the parameter on the screen.
- PLAY: Exit Secret Mode and put the WT11 back into normal performance play mode.

The following instructions outline the steps for placing the Yamaha WT11 into the various Secret Modes, as well as the available edit functions in each mode. Continue on to next pages for detailed instructions:

- Performance Edit Mode - page 2
- Voice Edit Mode - page 3
- Test Mode - page 5

To Enter Performance Edit Mode

a) To put WT11 into Secret Mode: Press and hold DATA ENTRY+1 and EFFECT buttons and power up the synth. Hold both buttons until greeting message appears on the LCD screen, then release the buttons.

b) To enter Edit Performance mode, hold down EFFECT and press EDIT.

LCD will read: Ep: Edit inst?

Note: The Ep: designation on the LCD indicates that you are in Edit Performance mode.

c) The EFFECT BALANCE buttons can be used to select performance parameters to edit.

Parameters available to edit:

Edit inst?	1-3	
asmode	0-1	(assign mode)
dsp_sel	0-10	
balance	0-99	(dsp)
time	0-36	(dsp)
lfo_ctrl	0-2	(breath, lip, off)

d) Performance can now be stored in any performance memory ("I" bank)

e) The BANK/PARAMETER button will return to top of Performance Edit mode

LCD will read: Ep: Edit inst? (or Ep: asmode, Ep:dsp_sel, etc.)

f) The Performance Edit parameter of "Edit inst?" (first entry in parameter list above) has a selection of 8 instruments and 10 instrument parameters available to edit. To edit these, use the EFFECT BALANCE buttons within the Edit Performance mode until the LCD reads: Ep: Edit inst? Press YES.

g) Use the EFFECT BALANCE buttons to select the instrument to edit (01 through 08), then press YES.

LCD will read: Ep: Edit Inst 01?

Note: This mode is often called Edit Instrument mode, and is a sub-mode to Edit Performance.

h) When a voice has been selected to edit, use the EFFECT BALANCE buttons to select the instrument parameter to edit. The DATA ENTRY buttons will allow you to change the parameter value.

LCD will read: E1:num_note 4 (or E2:num_note, E3:num_note, E4:num_note, etc.)

Note: The E1: designation on the LCD indicates that you are in Edit Element 1 mode.

i) The Voice Parameters available to edit are:

num_note	0-8	
vmem_num	0-127	
midi_ch	0-16	(midi channel)
limit_l	0-127	
limit_h	0-127	
dtm	0-14	
note_sft	0-48	(note shift)
volume	0-99	(volume)
out_asgn	0-3	
lfos	0-3	(no select)

j) The BANK/PARAMETER button will return to top of Edit Instrument mode

LCD will read: Ep: Edit inst?

To Enter Voice Edit Mode

- a) To put WT11 into Secret Mode: Press and hold DATA ENTRY+1 and EFFECT buttons, and then while still holding, power up the synth. Hold both buttons until greeting message appears on the LCD screen, then release the buttons.
- b) To enter Voice Edit mode, hold down EFFECT and press PLAY
LCD will read: S:A01 WT11 A01
A01 indicates current bank and voice, in this example bank A, voice 01.
- c) Select desired voice to edit using DATA ENTRY buttons and BANK button.
- d) Hold down EFFECT and press EDIT to enter Voice Edit mode.
LCD will read: ES: Edit oprtr?

The selected voice can now be edited and stored into any raw voice memory.

- e) The EFFECT BALANCE buttons can be used to select voice parameters to edit.

Parameters available to edit:

Edit oprtr ?

ALG 0-7 (algorithm)

FBL 0-7

Edit LFO ? (low frequency oscillator)

TRPS 0-48 (transpose)

MONO 0-1 (monophonic effect)

SUS 0-1 (sustain)

PBR 0-12 (pitch bend range)

Edit porta ? (portamento time)

Edit PEG ?

Edit FC ? (foot control)

Edit MW ?

Edit BC ? (breath control)

Edit AT ? (after touch)

NOTE: Many of the voice parameters have sub-parameters available to edit. Those with sub-parameters are noted with a "?" instead of a data value. To edit sub-parameters of any of the voice parameters shown in the list above:

- 1) Per the step above, use EFFECT BALANCE buttons to select the voice parameter you wish to access the sub-parameters. As an example:
LCD will read: Es: Edit oprtr ?
 - 2) Press YES (DATA ENTRY +1). Use the EFFECT BALANCE -1/+1 keys to select the operator. Press YES to continue.
LCD will read: E1: Edit EG?
 - 3) Press YES and use the EFFECT BALANCE -1/+1 keys to select the EG parameter, or use the EFFECT BALANCE -1/+1 keys to select Edit Frequency Scaling, sensitivity, and other parameters. See the detailed list below.
- f) The BANK/PARAMETER key can always be used to move up one level when in Voice Edit mode.

g) Voice Edit Parameters available to edit, including continued sub-sub-levels:

Edit oprtr? 1-4		
<u>Edit EG?</u>		(envelope generator)
AR	0-31	
D1R	0-31	
D1L	0-15	
D2R	0-31	
RR	1-15	
EGSFT	0	
<u>Edit frqncy?</u>		(frequency)
CRS	0-63	
FINE	0-15	
FIX	0-1	
FIXRG	0-7	
LS	0-99	
RS	0-3	
EBS	0-7	
ABS	0-1	
KVS	0-7	
TL	0-99	(operator output level)
DTN	0-6	
OSW	0-7	
ALG	0-7	
FBL	0-7	
<u>Edit LFO?</u>		(low frequency oscillator)
LFS	0-99	(speed)
LFD	0-99	(delay)
PMD	0-99	
AMD	0-99	
SYNC	0-1	
LFW	0-3	(waveform)
PMS	0-7	
AMS	0-3	
TRPS	0-48	(transpose)
MONO	0-1	
SUS	0-1	
PBR	0-12	(pitch bend range)
<u>Edit porta?</u>		
PM	0-1	(full time or fingered portamento)
Port	0-99	(portamento time)
<u>Edit PEG?</u>		
PR 1	0-99	
PR 2	0-99	
PR 3	0-99	
PL 1	0-99	
PL 2	0-99	
PL 3	0-99	

Voice Edit Parameters available (continued from previous page)

Edit FC?

FC_VOL	0-99	
FC_PIT	0-99	(pitch)
FC_AMP	0-99	

Edit MW?

MW_PIT	0-99	
MW_AMP	0-99	

Edit BC? (breath control)

BC_PIT	0-99	(pitch)
BC_AMP	0-99	(amplitude)
BC_P_B	0-100	(pitch bias)
BC_E_B	0-99	(eg bias)

Edit AT? (after touch)

AT_PIT	0-99	(pitch)
AT_AMP	0-99	(amplitude)
AT_P_B	0-100	(pitch bias)
AT_E_B	0-99	(envelope generator bias)

To Enter Test Mode

- To put WT11 into Secret Mode: Press and hold DATA ENTRY+1 and EFFECT buttons and power up the synth. Hold both buttons until greeting message appears on the LCD screen, then release the buttons.
- To enter Test Mode, hold down EFFECT and press STORE.
LCD will read: T: V1.0 88/10/4
Followed by: T0: Test entry?
- Press YES to continue test. Press NO to cancel test. Pressing No will also exit Secret Mode.
- Use EFFECT BALANCE +1 to step through the test sequence.
- Test sequence:

T1: RAM	
T2: (display)	all LEDs and LCD elements will flash on/off until next test is selected
T3: LED 1-4	all LEDs are sequentially turned on/off until next test is selected
T4: PSW [STOR] **	panel switch test - press the STORE switch, etc.
T5: FSW [ft -] **	foot switch test - press the INC foot switch, then the DEC foot switch
T6: WM-IN 00 OK	if a WX is plugged into the WX input, this will read OK, otherwise NG
T7: MIDI OK	if midi in is connected to midi out, test will read OK
T8: CASSETTE OK	if cassette interface is connected to a test signal, test will read OK
TA: OUTPUT L	sound generation 1000Hz sine on left channel output
TB: OUTPUT R	sound generation 1000Hz sine on right channel output
TC: LDSP 1	sound generation 1000Hz sine on left channel output
TC: LDSP 2	sound generation 1000Hz sine on right channel output
TF: Factory set?	reset to factory data if YES is pressed, EFFECT +1 will abort test
TE: Test exit?	exit test