WT588D SOFTWARE USER MANUAL

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1.SOFTWARE SETUP

Double click the "setup_E.exe" start to setup the software to PC.

2.SOFTWARE OPERATIONS

2.1.SOFTWARE INTERFACE

Voice loading area : Load voice files here ,Voice editing area: Insert voice files form loading area, and ed it. Voice files in editing area will not take up any memory space .

ور الم	V588D VoiceChi View Mode Operat	p V1.0 ion Iool Lang	guage H	elp		Ec	quation	No. :	n 💌 🛨 Flash	: 32M 丈
No.	Wav/MP3/WMA	Sampling rate	Bit	Track	Time		No. T	уре	Wav/MP3/WMA	
	VOIC	ELOADIN	G AR	EA						AREA
Sound	Length								Flash Used	

2.1.1.BUTTONS



They are "New project", "Open project", "Compile (save BIN)", "Options", "Download data".

2.2.NEW PROJECT

Click "File" \rightarrow "New project" to create a new project.





Name the project in the pop-up dialog box, and choose a folder to save it.

Save As					? 🗙
Save in:	C folder2		•	🗢 🗈 💣 💷 •	
My Recent Documents Desktop					
My Documents					
My Computer					
	File name:	1		• [Save
My Network Places	Save as type:	Project Files(*.winproj)		<u> </u>	Cancel

Press "save" the project will save in a new project folder, this system newed folder include all the project information.

2.3.MEMORY SIZE SETTINGS

In the top right corner of software interface, SPI-Flash size can be setted. There are 2M,4M,8M,16M,32M,64M options. Choose the size according to your need. Please refer to "**WT588D SUPPLY INFORMATION**".



Flash :	32M 👻
	64M
	32M
	16M
	4M 2M

2.4.LOADING VOICE

Voice sampling rate must be 6000Hz, 8000Hz, 10000Hz, 12000Hz, 14000Hz, 16000Hz, 18000Hz or 20000Hz, right click the mouse button and load the voice files.

No.	Wav/MP3/WMA	Sampling rate	Bit	Track	Time	
		Load Delete Empty				
-		Play				

Choose the voice files ,and open.



After voice loaded in , their information will show up, such as file name, sam pling rate, bit, track,duration.

No.	Wav/MP3/WMA	Sampling rate	Bit	Track	Time	
001	a.wav	12000 Hz	16 Bit	MONO	8802 ms	
002	b.wav	12000 Hz	16 Bit	MONO	8840 ms	
003	c.wav	12000 Hz	16 Bit	MONO	8411 ms	
004	d.wav	12000 Hz	16 Bit	MONO	4060 ms	
005	e.wav	12000 Hz	16 Bit	MONO	9606 ms	
006	f.wav	12000 Hz	16 Bit	MONO	6198 ms	
007	g.wav	10000 Hz	16 Bit	MONO	1262 ms	
008	h.wav	10000 Hz	16 Bit	MONO	1029 ms	
009	i.wav	10000 Hz	16 Bit	MONO	921 ms	
010	j.wav	10000 Hz	16 Bit	MONO	910 ms	
011	k.wav	10000 Hz	16 Bit	MONO	813 ms	
012	l.wav	10000 Hz	16 Bit	MONO	1048 ms	
013	m.wav	10000 Hz	16 Bit	MONO	895 ms	

2.5.MODES OPTIONS.

Click "Operation" \rightarrow " Options" enter into the interface.

C One Line I	Mode	C 3 x 8 Matrix Mode				
C Three Line	e Mode	C Parallel port mode				
Key Mode						
iound Output -						
C DAC	PWM					
usy Mode :						
C LOW	C High					
Pull High Resi	stor					

There are 6 control modes , the default is "Key mode".

2.5.1.ONE LINE SERIAL MODE

Click "Operation" \rightarrow "Options", choose "one line mode" and press "OK".

Click "Operation" → "Key setup", you can see each I/O corresponding KEY, KEY 1 to KEY 10 default. KEY 4 (corresponding I/O P03) is locked up, P03 is DATA pin in the mode. Can not be used as a key. Other I/Os can be used as keys. Trigger mode including "No function", "Edge retrigger", "Edge no retri gger", "Level hold loop", Level loop", "On/off", "Next unloop", "Prev unloop", "Next loop", "Prev loop", "Level unloop", "Pause", "Vol -", "Stop". After choose trigger mode, when the corresponding key(I/O) set to low level, voice can be trigger to play i n the setted

trigger mode.

The available keys(I/Os) were defaulted as "Edge retrigger".

Key 1	Edge retrigger 👱	Key 9	Edge retrigger 💌	Key 17	Edge retrigger
Key 2	Edge retrigger 💌] Key 10	Edge retrigger 💌	Key 18	Edge retrigger 🔄
Key 3	Edge retrigger 💌	Key 11	Edge retrigger 💌	Key 19	Edge retrigger 🔄
key 4	Edge retrigger 💌	Key 12	Edge retrigger 💌	Key 20	Edge retrigger 💌
key 5	Edge retrigger 💌	Key 13	Edge retrigger 💌	Key 21	Edge retrigger 🔄
key 6	Edge retrigger 💌	Key 14	Edge retrigger 💌	Key 22	Edge retrigger 🔄
Key 7	Edge retrigger 💌	Key 15	Edge retrigger 💌	Key 23	Edge retrigger 💌
Key 8	Edge retrigger 💌	Key 16	Edge retrigger 💌	Key 24	Edge retrigger

Click "Operation" \rightarrow "Equation setup", to set each key's(I/O's) trigger address.

(ey 1	0	Key 9	8	Key 17	16
(ey 2	1	- Key 10	9	- Key 18	17
(ey 3	2	Key 11	10	- Key 19	18
(ey 4	3	- Key 12	11	- Key 20	19
(ey 5	4	- Key 13	12	- Key 21	20
(ey 6	5	- Key 14	13	- Key 22	21
(ey 7	6	- Key 15	14	- Key 23	22
(ey 8	7	Key 16	15	Key 24	23

KEY 1 to KEY 10 default trigger address 0 $\,$ 9, the addresses can be changed input number between 0~ 219. The

following trigger modes can direct trigger voice addresses . "Edge retrigger", " Edge no retrigger", "Level hold loop", "Level loop"," On/off", "Level unloop". Only the corresponding key(I/O) set to these trigger modes, addresses can be triggered directly.

Addresses information please refer to 2.8 VOICE ADDRESSES

2.5.2.THREE LINE SERIAL MODE

Click "Operation" "Options", choose "three line mode" and press "OK". In this mode, all the I/Os can not be used as keys. As you can see all the keys were locked up.

Key 1	No Function	Ŧ	Key 9	Edge retrigger	Key 17	Edge retrigger 💌
Key 2	No Function	Ŧ	Key 10	Edge retrigger	Key 18	Edge retrigger 💌
Key 3	No Function	Y	Key 11	Edge retrigger	Key 19	Edge retrigger 💌
key 4	Edge retrigger	7	Key 12	Edge retrigger 🔄	Key 20	Edge retrigger 💌
key 5	Edge retrigger	-	Key 13	Edge retrigger	Key 21	Edge retrigger 💌
key 6	Edge retrigger	Y	Key 14	Edge retrigger	Key 22	Edge retrigger 💌
(ey 7	Edge retrigger	Ŧ	Key 15	Edge retrigger	Key 23	Edge retrigger 🔄
(ey 8	Edge retrigger	v	Key 16	Edge retrigger 💌	Key 24	Edge retrigger 💌

Open "Operation" "Equation", Key 2(P01), Key 3(P02), Key4(P03) were locked up. Other keys also invalid here.

Key 1	0	- Key 9	8	- Key 17	16
Key 2	1	Key 10	9	- Key 18	17
Key 3	2	Key 11	10	- Key 19	18
Key 4	3	- Key 12	11	- Key 20	19
Key 5	4	- Key 13	12	- Key 21	20
(ey 6	5	- Key 14	13	- Key 22	21
Key 7	6	- Key 15	14	- Key 23	22
Key 8	7	- Key 16	15	- Key 24	23

2.5.3.MP3 MODE

Click "Operation" "Options", choose "MP3 mode" and press "OK".

In this mode, Key 1 to Key 6 default as "STOP", "ON/OFF","NEXT","PREV","VOL+","VOL -" individually. Other I/Os are invalid.

Key 1	Edge retrigger	Key 9	No Function	Key 17	Edge retrigger	r.
Key 2	Edge retrigger	🚽 Key 10	No Function	🐷 Key 18	Edge retrigger	-
Key 3	Edge retrigger	👻 Key 11	Edge retrigger	👻 Key 19	Edge retrigger	-
key 4	Edge retrigger	- Key 12	Edge retrigger	- Key 20	Edge retrigger	-
key 5	Edge retrigger	👻 Key 13	Edge retrigger	👻 Key 21	Edge retrigger	-
key 6	Edge retrigger	👻 Key 14	Edge retrigger	- Key 22	Edge retrigger	-
Key 7	No Function	👻 Key 15	Edge retrigger	👻 Key 23	Edge retrigger	-
Key 8	No Function	🚽 Key 16	Edge retrigger	🚽 Key 24	Edge retrigger	-

Open "Operation" "Equation", Key 1 to key 6 addresses were locked up. Others invalid.

(ey 1	0	Key 9	8	Key 17	16
(ey 2	1	Key 10	9	- Key 18	17
Кеу З	2	Key 11	10	- Key 19	18
Key 4	3	Key 12	11	- Key 20	19
Key 5	4	- Key 13	12	- Key 21	20
Key 6	5	Key 14	13	- Key 22	21
Key 7	6	Key 15	14	- Key 23	22
Key 8	7	Key 16	15	- Key 24	23

2.5.4.KEY MODE

Click "Operation" "Options", choose "MP3 mode" and press "OK". In this mode, Key 1(P00), Key2(P01), Key3(P02), Key4(P03), Key5(P0 4), Key6(P05), Key7(P06), Key8(P07),

Key9(P10), Key 10(P11) all are valid. Open "Operation" "Key set", Keys(I/Os) trigger mode can be changed by drop - down manu. The default trigger mode is Edge retrigger.

Key 1	Edge retrigger 🔄	Key 9	Edge retrigger 💌	Key 17	Edge retrigger 🔄
Key 2	Edge retrigger 💌] Key 10	Edge retrigger 💌	Key 18	Edge retrigger 💌
Key 3	Edge retrigger 👱] Key 11	Edge retrigger 🔄	Key 19	Edge retrigger 💌
key 4	Edge retrigger 💌] Key 12	Edge retrigger 🔄	Key 20	Edge retrigger 💌
key 5	Edge retrigger 💌	Key 13	Edge retrigger 🔄	Key 21	Edge retrigger 💽
key 6	Edge retrigger 💌	Key 14	Edge retrigger 🔄	Key 22	Edge retrigger 💽
Key 7	Edge retrigger 💌	Key 15	Edge retrigger 🔄	Key 23	Edge retrigger 🔄
Key 8	Edge retrigger 💌	Key 16	Edge retrigger 🔄	Key 24	Edge retrigger 💌
				OK	Cancel

Trigger addresses can be changed by input addresses .

(ey 1	0	Key 9	8	Key 17	16
(ey 2	1	Key 10	9	- Key 18	17
(ey 3	2	- Key 11	10	- Key 19	18
(ey 4	3	Key 12	11	- Key 20	19
(ey 5	4	- Key 13	12	- Key 21	20
(ey 6	5	- Key 14	13	- Key 22	21
(ey 7	6	- Key 15	14	- Key 23	22
(ey 8	7	Key 16	15	- Key 24	23

KEY 1 to KEY 10 default trigger address 0 9, the addresses can be changed input number between 0 ~219. The following trigger modes can direct trigger voice addresses . "Edge retrigger", "Edge no retrigger", "Level hold loop", "Level loop", "On/off", "Level unloop". Only the corresponding key(I/O) set to these trigger modes, addresses can be triggered directly.

Addresses information please refer to 2.8 VOICE ADDRESSES

2.5.5. MATRIX 3x8 MODE

Click "Operation" "Options", choose "Matrix 3X8 mode" and press "OK".

In this mode, voice address triggered by Matrix(consist of I/Os), all the keys were locked up, and Edge retrigger. Open "Operation" "Key setup", all keys locked.

Key 1	Edge retrigger		(ey 9	Edge retrigger	v	Key 17	Edge retrigger	v
Key 2	Edge retrigger	y k	(ey 10	Edge retrigger	-	Key 18	Edge retrigger	-
Key 3	Edge retrigger	- K	key 11	Edge retrigger	-	Key 19	Edge retrigger	-
key 4	Edge retrigger	- K	(ey 12	Edge retrigger	-	Key 20	Edge retrigger	*
key 5	Edge retrigger		(ey 13	Edge retrigger	-	Key 21	Edge retrigger	-
key 6	Edge retrigger	- K	key 14	Edge retrigger	-	Key 22	Edge retrigger	-
Key 7	Edge retrigger		(ey 15	Edge retrigger	-	Key 23	Edge retrigger	<u>v</u>
Key 8	Edge retrigger		(ey 16	Edge retrigger	-	Key 24	Edge retrigger	w.
						OK	Capcel	8

Open "Operation" "Equation setup", 24 voice addresses can be setted from 0~219

quation	n Setup				
Key 1	0	Key 9	8	Key 17	16
Key 2	1	Key 10	9	Key 18	17
Key 3	2	Key 11	10	Key 19	18
Key 4	3	Key 12	11	Key 20	19
Key 5	4	Key 13	12	Key 21	20
Key 6	5	Key 14	13	Key 22	21
Key 7	6	Key 15	14	Key 23	22
Key 8	7	Key 16	15	Key 24	23
Input Ra	inge : 0 - 219			ок	Cancel

2.5.6.PARALLEL MODE

Click "Operation" "Options", choose "Matrix 3X8 mode" and press "OK".

In this mode, Key1 (P00) defined as SBT pin, P01,P02,P03,P04,P05,P06,P07,P10 are addresses.

Open "Operation" "Key setup", only key 1 "s trigger mode can be changed. We suggest set to "Edge retrigger" or "Edge no retrigger" or "Level hold loop" or "Level loop" or "On/off" or "Level unloop". Because these mode can direct trigger voic e addresses.

Key 1	Edge retrigger	Key 9	Edge retrigger 💌	Key 17	Edge retrigger 🔄
Key 2	Edge retrigger	Key 10	Edge retrigger 💌	Key 18	Edge retrigger 💌
Кеу З	Edge retrigger	Key 11	Edge retrigger 💌	Key 19	Edge retrigger 💌
key 4	Edge retrigger	Key 12	Edge retrigger 💌	Key 20	Edge retrigger 💌
key 5	Edge retrigger	Key 13	Edge retrigger 💌	Key 21	Edge retrigger 💌
key 6	Edge retrigger	Key 14	Edge retrigger 💌	Key 22	Edge retrigger 💌
Key 7	Edge retrigger	Key 15	Edge retrigger 💌	Key 23	Edge retrigger 💌
Key 8	Edge retrigger	Key 16	Edge retrigger 💌	Key 24	Edge retrigger 💌
				OK	Capital



(ey 1	0	Key 9	8	- Key 17	16
(ey 2	1	Key 10	9	- Key 18	17
(ey 3	2	Key 11	10	- Key 19	18
(ey 4	3	Key 12	11	- Key 20	19
(ey 5	4	Key 13	12	- Key 21	20
(ey 6	5	Key 14	13	- Key 22	21
(ey 7	6	Key 15	14	- Key 23	22
(ey 8	7	Key 16	15	- Key 24	23

2.6.AUDIO OUTPUT

Open "Operation" "Options" and choose audio output mode. DAC output : external amplifier is needed PWM output: direct drives speaker



2.7.BUSY

Open "Operation" "Options", to set the BUSY port(I/O P17) high level or low level when playing voice.

C High	
	C High

2.8.VOICE ADDRESSES.

Choose the Equation NO. by "+" or "-", and load (double click left button or click right button) the voice files from "VOICE LOADING AREA", voice files can be reused.

No.	Туре	Way/MP3/WMA	
-----	------	-------------	--

There are 0~219 options in "Equation NO.", up addresses by "+" (or "W"), down addresses by "-"(or "S"). For example, set Key 1 trigger mode as "Edge retrigger", Equation No. as 0, Key 1(P00) can trigger voices to play in order in address 0.

There are 220 voice addresses total. 85 groups of voice can be load to each address max. Mute also can be inserted. The same voice use in other addresses, will not take additional memory space.(just take one voice space). At the same time, mute will not take space also. The total size depends on the size of voices in "VOICE LOADING AREA".

2.9.INSERT MUTE(SILENCE)

Right click mouse button in "VOICE EDITING AREA", choose "Insert" "User defined silence", also 10ms, 20ms, 50ms, 100ms, 200ms, 300ms silence can be chosen directly.

For example insert 10ms mute between voice 1 and voice 2, after voice 1 played, there are 10ms mute, and then play voice 2.



No.	Туре	6	Wav/M	P3/WMA
001 002	SOU	ND ND	a.wav b.wav	
003 004	50	In	sert 🕨	WAV / MP3 / WMA
		Del Emp	lete oty	<u>1</u> 0ms 20ms
		<u>P</u> 1:	ay	
				100ms 200ms 300ms
				Vser Defined Silence

Also in "User defined silence" insert silence. Such as insert 100ms.

Taas da a silaa aa kina	
10	X 10ms 💌
ок	Cancel

After input multiple, and "OK" 100ms silence already inserted.

No.	Туре	Wav/MP3/WMA	
001	SOUND	a.wav	1
002	SOUND	b.wav	
003	SILENCE	100 ms	
004	SOUND	c.wav	
005	SOUND	d.wav	

2.10. DELETE AND EMPTY VOICES

In the "VOICE LOADING AREA" we can choose the voice and delete one by one. Also choose "EMPTY", to delete all the voices by one time . also will empty all the voice in "VOICE EDITING AREA".

In the "VOICE EDITING AREA", we can choose the voice and delete one by one. choose "EMPTY", to del ete all the voices in current address by one time. Other addresses voices will not be deleted.

2.11. COMPILE (SAVE BIN)

After finish the project, we have to compile it as BIN file, and download to SPI -Flash on WT588D module. Open "Operation" "Compile(save bin)" or press"F4", to compile Bin file.





If the Bin file size big than the SPI-Flash memory, there will be a pop up dialog box to inform you change biger memory. The percentage(the Bin file take the memory size)will show in the lower right corner.

				1.1
12 70	% fl	ash use	- b	

2.12.DOWNLOAD DATA

Put the module on the programmer properly and connect to the PC by USB ,Open "Tool" "download data", or press F5 ,download data to Flash memory.

elect Target Flash Size —	Duenitad Uniy/	
32M 💌	Connect Dis	connect
arget File		
E:\folderA\folder2\1.winpro	oj\1.winproj.bin	Browse
Do	woload CRI Elach	
	Whited SF1 Hash	
	WINDOU OF LEAST	
	WINDOU OF I FIGHT	

Select the Flash size you are going to program. And then click "Conne ct" .

ter ¥1.	0 (SPI	Downlo	oad Only	7) 🗙
d				
	OK			
	ter ¥1. :d	ter ¥1.0 (SPI d OK	ter ¥1.0 (SPI Downlo d OK	ter ¥1.0 (SPI Download Only d OK

Click "OK" to keep going.

2M 🗾	Connect	Disconnect
get File		
\folderA\folder2\1.winproj`	\1.winproj.bin	Browse
Dowr	nload SPI Flash	
B Status : Connected ash Type : SPI, Flash Size ternal Data Size : 0 (bytes) peration Status : Connected	: 33554432 1	

Click "Download SPI Flash", and will into Erasing status.

1

Select Target Flash Size		1
32M <u>▼</u>	Connect	Disconnect
Target File		
E:\folderA\folder2\1.winpro	j\1.winproj.bin	Browse
Dov	vnload SPI Flash	
Chip : W55U01 HID USB Status : Connected Flash Type : SPI, Flash Size Internal Data Size : 524288 Operation Status : Erasing	: 33554432 (bytes)	2

After finish Erasing, into Downloading status.

2141	Connect	Disconnect
rget File		
:\folderA\folder2\1.winproj\	1.winproj.bin	Browse
Down	iload SPI Flash	
SB Status : Connected lash Type : SPI, Flash Size : iternal Data Size : 524288 (i peration Status : Download	: 33554432 bytes) ing	

Download Ok, all the data already in SPI -Flash memory.

	Connect	Disconnect
rget File		
:\folderA\folder2\1.winproj`	1.winproj.bin	Browse
Dowr	nload SPI Flash	
SB Status : Connected lash Type : SPI, Flash Size iternal Data Size : 524288 (iperation Status : Download	: 33554432 bytes) OK	

2.13.OPERATION STEPS



Note: If you already have Bin file, you can open it by PC softwa re and download data directly, Unnecessary to editing the voice again.