Call Recorder Apresa Synway Card diagnostics Manual and procedure

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Software version xxx



Vidicode Datacommunicatie BV Blauw-roodlaan 140 2718 SK Zoetermeer The Netherlands Phone +31(0)79 3617181 Fax +31(0)79 3618092 Sales +31(0)79 3471010 Support +31(0)79 3471005 vidicode

info@vidicode.com Internet www.vidicode.com

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1 PBX Support request

This document describes the procedure when there is a problem with Apresa while recording using a Synway card, and the problem is related to this recording card.

The recording cards from Synway support several PBX types and phone types. Please verify that your PBX model is selected in the interface of Apresa (Options->Card Settings). To see if your PBX and phone types are supported, refer to the document DST_PBX_Support_xxxx.xls (where xxxx is a version number).

1.1 Basic procedure

The basic procedure, as described by Synway, can be found in the document CasTool_UserManual. This user manual assumes Windows is used. Apresa uses a Linux distribution, therefore the visual screen will be a bit different, but basically the CasTool works the same.

NOTE! To start the CasTool on Apresa, you need to connect a monitor, mouse, and keyboard to the Apresa machine (*). Log on using the "vidi" account, (see manual for default password).

Before starting the CasTool, the support team might instruct you to make changes to the configuration file ShConfig.ini first. This file can be changed as follows:

- type: nano /var/apresa/data/ShConfig.ini
- the file will open in a text editor
- make the required changes
- save the file with Ctrl+O followed by Enter
- press Ctrl+X to exit

When you are instructed to record raw wave data, the following change must be made to the ShConfig.ini file: This can be done as follows:

- find the line that reads DstRecRawData=0
- change it to DstRecRawData=1

This setting will be set back to zero automatically after each run of CasTool.

1.2 Starting the CasTool

Start the CasTool by typing castool followed by Enter. It might again ask for the password as confirmation. For the use of CasTool, see the user

manual of CasTool mentioned earlier.

After the CasTool has closed, Apresa will prepare a compressed file, that you can download using the web interface (Tools->System->Files). To preserve disk space on the Apresa server, delete the file on the same web page, after you downloaded it. This file then needs to be send to the support person or team working on this problem.

(*) It is also possible to do this remotely from a Windows PC, but it is complicated. It requires the use and installation of extra software on your PC:

- a secure shell program (such as PuTTY)
- a X-window manager for Windows (such as Xming)

The remote shell option must be enabled in the System options of Apresa. After you have started the X-window manager, connect to Apresa with the remote shell program.

- Log on using the "vidi" account, (see manual for default password).
- Type: export DISPLAY=1.2.3.4:0.0 (replace 1.2.3.4 with the IP address of your PC)

The rest of the procedure is the same as described earlier.



CasTool User Manual

Synway Information Engineering Co., Ltd

www.synway.net

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2 Overview

CasTool.exe is a special tool we provide to help solve problems involving the digital station tap board, primarily used in:

1. Logging signaling messages for the digital phone, monitoring channel states and recording on-channel voices (applicable to Common Working Mode).

2. Recording raw waves or raw data flows (applicable to Raw Data Acquisition Mode).

3. Recording bit streams (applicable to Common Working Mode)

At present the models of digital station tap boards are as follows:

1. A-type: SHR-16DA-CT/PCI, SHR-24DA-CT/PCI

2. B-type: DST-24B/PCI, DST-24B/PCI+, DST-24B/PCI(2.0), DST-24B/PCI+(2.0), DST-24B/PCIe(2.0), DST-24B/PCIe+(2.0)

The two working modes mentioned above are described as follows:

1. Common Working Mode: It is selected in case that the check box before 'Rec Raw Mode' is not ticked when using ShCtiConfig.exe to configure such information as PBX model, etc. In this mode, you can perform the recording of signaling messages (applicable to both A-type and B-type boards) or bit streams (applicable only to B-type boards). The bit stream is the effective raw data composed of voice data and signaling messages, generated by parsing the original waveforms.

2. Raw Data Acquisition Mode: It is selected in case that the check box before 'Rec Raw Mode' is ticked when using ShCtiConfig.exe to perform configuration. Note: SHR-16DA-CT/PCI and SHR-24DA-CT/PCI digital station tap boards, if working in Raw Data Acquisition Mode, support the acquisition of raw data flows, that is, collecting digital signals 0 or 1 at a specified rate. Some operations on parameter configuration may be required to enable this feature. Please contact us (see Appendix B) for help when necessary. DST-24B/PCI, DST-24B/PCI+, DST-24B/PCIe and DST-24B/PCIe+ digital station tap boards, if working in Raw Data Acquisition Mode, support the acquisition of raw waves, that is, performing the A/D conversion sampling to on-line raw waves at the rate of 10M/S.

This software cannot run without ShConfig.ini and ShIndex.ini, so you must configure ShConfig.ini properly for the digital station tap board according to the description in the document 'DSTBoard_Config_Manual.pdf', which can be downloaded from the link:

http://www.synway.net/DownLoad/DST_help_document.rar

3 Operation Guide

3.1 Recording signalling Messages (applicable to Common Working mode)

Step 1: Start CasTool.exe and the main interface shows as **Fout! Verwijzingsbron niet gevonden.**

TextInfo	ChInfo	T	Board	1	8 Channel:	Coun	(s)	1
7h ThState			Start Time:		Σ	nd Time:		1
NTWF BUFFER UKET LED INFO allerId alledId			80.	wEventCode	deSubReason	d#ItraInfo	deDataLe	pvBuffer
Channel Info PhuModel:	- 4 xire	Set Start						
PhoneModel:	Bit Stream: Г	Znd Cancel	<					3
Bar Yave:	Advance Set	2		Event Pause Er				T Exclud

Figure 2-1

As seen in Figure 2-1, there are two columns 'TestInfo' and 'ChInfo' on the top of the left list window. The 'TestInfo' will cover such information as Ch, ChState, DTMF BUFFER, DKEY, LCD INFO, CallerId and CalledId, while the 'ChInfo' will show the monitored situation in real time. The right list window will display the D-channel event code and other parameters in turn.

The item 'Event Filter' at the bottom is used to set conditions for which events you exactly want to display. For example, if you only want events with the event code of 1008 and 104a to be displayed, fill in '1008 104a'; if you want all events but those with the event code of 1008 and 104a to be displayed, fill in '1008 104a' and tick the check box 'Exclude'. Note that up to 10 event filter conditions can be set at a time and the filled-in event codes should be separated by blank space.

Step 2: Fill in some parameters under 'Channel Info' as shown in Figure 2-2.

TestInfo	ChInfo	Board	1	78 Channel:	Coun	Counts:		
Ch ChState	0 IDLE	Start Time:		2	Ind Time:		1	
DTMF BUFFER DRET LEE INFO CallerId CalledId CalledId		¥0,	wEventCode	deSubReason	dvätraInfo	dxDataLe	pvBuffer	
Channel Info PhaModel:	Contraction of the second second							
ChannelNun 0 Phonestodel 64	CODD4						~	
EnRecord:		ClearEvents	Event Pause	vent Filter			Exclude	

The PBX model, the number of the monitored channel and the phone model are the essential information that you must input (that is, these three fields can't be left empty). They will be written into the generated log file.

For the use of 4-wire digital phones, tick the check box '4 wire'; or what you record may only include either uplink or downlink signals. In such situation, please make sure to tick this check box and then perform the recording again. Don't forget that the correct line connection is the prerequisite for such operation. See relative hardware manuals to find the connection rules for different kinds of 4-wire digital phones.

Step 3: If you need recording, tick the check box after 'EnRecord' as shown in Figure 2-3.

TestInfo	Chinfo		Board	1 (78 Channel:	Coun	ts:	
Ch ChState	0 IDLE		Start Time:		1	ad Time:		
DIMF BUFFER DAET UCD INFO CallerId CalledId			No.	wEventCode	dwSubReason	dwXtraInfo	deDataLe.	pwBuffer
	AVATA_2	Set Start	1					
ChannelNum:	0 4 wire							
PhoneModel:	6408D+	δnđ	1					
(EnRecord	🕑 Bit Stress: 🗖	Cancel						2
EnRecord:	🕑 Bit Stream: 🗖	Gancel	16					6

As long as 'EnRecord' is ticked, the program will automatically record A-Law formatted WAV files under the directory of the log file.

Step 4: When you finish setting the parameters under 'Channel Info', click on 'Set' as shown in Figure 2-4.

TestInfo	ChInfo	T	Board	1	78 Channel:	Coun	ts:	
Ch ChState	0 IDLE		Start Time:		E	nd Time:		
DTWF BUFFER DRET LED INFO CallerId CalleRId CalleRId			No.	wEventCode	dwSubReason	dwItraInfo	deDataLe	pvBuffer
	AXA.2	Set Stort	>					
	108D+	End						
EnRecord: 🔽 Raw Wave: 🔽		Cancel Exit	ClearEvents		ant Kiltar			F Exclud

Figure 2-4

Step 5: Then the dialog box of 'Success to set channel' will pop up as shown in Figure 2-5.

TestInfo	ChInfo	1	Board	1	8 Channel:	Coun	ts:	
Ch ChState	0 IDLE		Start Time:	1	ž	nd Time:		
DTMF BUFFER DKEY LCD INFO CallerId CalledId			So.	*EventCode	d#SubReason	delitraInfo	deBataLe	pvBuffer
Channel Inf	0		OX Success to se	t channel				
PbxModel:	avata_2	Set	1					
CharmelNum:	0 / 4 wire	Start	1					
PhoneModel:	6408D+	End	1					
EnRecord:	🕅 Bit Stream: 🥅	Cancel		161				>

After the channel is set successfully, a folder named 'CasFile' will be generated under the same directory of the program to store the recorded signaling logs and voice files. And the signaling logs and voice files are named in the form of 'hour_minute_second', e.g. 15_24_35.log, 15_24_35.wav. As to the format of the signaling content, please refer to Appendix A.

Step 6: Click on 'OK' back to the main window. Now the button 'Start' is activated as shown in Figure 2-6.

TestInfo	Chinfo	I	Board	1	18 Channel:	0 Count	5	
Th ThState	0 THE		Start Tine:		Ł	Ind Time:		
DTMF BUFFER USET LED INFO CallerId CalledId	INF		80.	wEventCode	dwSubReazon	d#ZtraInfo	deDataLe	pvBaffer
Channel Info FbxModel: [AV] ChannelHum: 0	WA 2	Set Start						
PhoneModel: 50 EnRecord: 7	Bit Stream:	End Cancel		(a)				>
Raw Wave:		Exit	E	Event Pause E		-	14	- Exclud

Figure 2-6

Step 7: At this time, you can click on the button of 'Start' to record signaling messages as shown in Figure 2-7.

TestInfo	ChInfo	Board		78 Channel:	6 Coun	ts:	
Ch ChState	0 IDLE	Start Tine:	ſ	E	Ind Time:		1
DIMF BUFFER DEFY LCD INFO CallerId CalledId		80.	wEventCode	deSubReason	dež traInfo	deDataLe	pvBaffer
Channel Info PbxWodel: ChannelHum	NATA_2						
PhoneModel: EnRecord:	Porto	j kom	121				
Raw Wave:	Advance Set Exit	the second second	Event Pause E		<u> </u>	1	T Exclude

Figure 2-7

Step 8:	Click on 'Start' ar	nd enter the interface	as shown in Figure 2-8.
---------	---------------------	------------------------	-------------------------

TestInfo	Chinfo	T	Board		8 Channel:		ts:	
Ch ChState	0 IDLE		Start Time:	2009-7	-15 10:22:50 g	nd Time:		4
DTMF BUFFER DOET LIED INFO CallerId CalledId	1912		- Xo.	w EventCode	d#SubReason	d#ItraInfo	deDataLe	pvBuffer
Channel Info PhyModel: A ChannelHun: 0	WA2	Set Start						
PhoneModel:	(000)	End	1					
EnRecord: 🗭 East Nave: 🗖	Bit Streen:	Cancel		Event Pause E		-		Exclude

Upon the start of recording signaling messages, do the following operations: perform relevant testing on the digital phone which is parallelly connected to the monitored channel (i.e. the channel with the number set in the previous step), record the testing time, content and the information displayed in the column 'ChInfo'.

Step 9: This step is optional. By setting conditions in the item 'Event Filter', the right list window displays only those events that comply with

the conditions. For example, if you input '1008 1001' to the item 'Event Filter', then the right list window (i.e. the D-channel events list) will output those events with the event code of 1008 or 1001. See Figure 2-9.

TestInfo	Chinfo	T	Board	9	8 Channel:	0 Coun	ts:	72	
Ch ChState	0 IDLE		Start Time:	Start Time: 2009-7-15 10:22:50 End Time:					
DTWF BUFFER DOREY LID INFO CallerId CalledId	**ZIT 2008			wEvent€vde 0x00001008 0x00001003 0x00001008 0x00001008 0x00001008 0x00001008 0x00001008	dxSubReason 020000000 020000000 020000000 020000000	dwXtraInfo 0x0000000 0x0000000 0x0000000 0x0000000	dxBataLe. 0x00000000 0x00000000 0x00000000 0x000000	pvBuffer a= a=E a=EXT 20 a=EXT 20 a=EXT 20	
Channel Info PbzModel:	JAVATA: 2	Set	1						
	0 F c size	Stort							
PhoneModel:	64360+	End							
EnRecord:	🔽 Bit Strew: 🗖	Cancel	<			1		2	

Figure 2-9

If you tick the check box before 'Exclude', the right list window only displays the events incompliant with the filled-in conditions. See Figure 2-10.

TestInfo	Chinfo	e 31	Board		78 Channel:	0 Coun	ts:	178
Th ThState	0 IDLE		Start Time:	2009-7	-15 10:22:50 g	nd Time:		
DTMF BUFFER DRET LCD INFO CallerId CalledId	4=EXT 2008	2008	86. 00000000 00000000 00000002 00000002 000000	2EventCode 0x0000008 0x0000000 0x0000102 0x0000102 0x0000008 0x00000008 0x00000002 0x0000102	dxSubReason 0x0000000 0x0000000 0x0000000 0x0000000	deXtraInfe 0x0000000 0x0000000 0x00000000 0x000000	dvDataLe 0x00000000 0x0000000 0x00000000 0x00000000 0x00000000 0x00000000 0x00000000 0x00000000 0x000000000 0x00000000 0x00000000 0x00000000	pvBuffer
Channel Info PbzModel:	AVATA: 2	Set						
ChannelNus:	0 F Caira	Start						
PhoneModel:	64060+	End						
	Bit Stream:	Cancel			vent Filter 🤇			F Exclud

Figure 2-10

When you click the button 'ClearEvents', all events that are already shown in the right list window will be cleared out. However, it won't disturb the display of subsequent events. See Figure 2-11.

Chinfo		Boar d		78 Channel:		ts:	216
0 TDLE		Start Time:	2009-7	-15 10:22:50 }	Ind Time:		
9-EXT 2008	2008	<u>No.</u>	wEventCode	dwSubReason	dwlitralafo	deDataLe	pvBuffer
WAX-2	Set Start						
54050) 7 Bit.Streen: [7	End	<	liat				3
	0 IDE +=EXT 2008	0 IDLE s=EXT 2008 2008 VAXA.2 J [4 yirs A02D ⁺ End	0 Start Time: 0 IDL2 s=EIT 2008 2008 VAXA.2 Start Gradue Start ACED+ End	0 TDL2 Start Time: 2009-7 x=ENT 2006 2006 No. v2ventCode VAXA.2 Set Start No. v2ventCode VAXA.2 Set Start No. v2ventCode VAXA.2 Set Start No. v2ventCode	0 III.Z Start Time: 2009-7-15 10:22:50 j w=EXT 2008 2008 No. wEventCode deSubReason w=EXT 2008 2008 Sat Sat	0 TDLZ Start Time: 2009-7-15 10:22:50 End Time: F *=EXT 2008 2008 WAXA.2 Sat Sat VAXA.2 Sat Sat Sat CODP End Sat Sat	0 TULE Start Time: 2008-7-15 10:22:50 End Time: w=EXT 2008 2008 WAYA,2 F* (vire Start Start End

When you click the button 'Event Pause', the event output is stopped and the button name changes to be 'Event Continue'. See Figure 2-12.

TestInfo	Chinfo	T.	Board		8 Channel:		ts:	216
lh IhState	0 IDLE		Start Time:	2009-7-	-15 10:22:50 1	Ind Time:		
DTMF BUFFER NET LD INFO AllerId AlledId	u=EIT 2008	2008	80.	wEventCode	dwSubReason	dwItraInfo	deDatale	pvBuffer
	AVATA_2	Set Start						
PhoneModel:	64060+	End						
EnRecord:	🛛 Bit Streen: 🥅	Cancel	<					2
Raw Wave:	Advance Sat	Exit	ClearEvents		NEW MARK	1008 1001		Exclud

Figure 2-12

If you want the list window to go on displaying the events, click the button 'Event Continue'. See Figure 2-13.

TextInfo	ChInfo		Board		8 Channel:	0 Coun	ts:	254
Ch ChState	0 IDLE		Start Time:	2009-7	-15 10:22:50	Ind Time: 🗌		
DIMF BUFFER DRET LCD INFO CallerId CalledId CalledId	4=ZIT 2008	2006	No.	wEventCode	deSubRearon	dwätr almfo	deBataLe	pvBuffer
	(WATA,2	Set Start						
PhoneModel:	64Deb+	End						
EnRecord:	🖾 Bit Stream: 🥅	Cancel			vent Filter	1008 1001	_	Exclude

Step 10: When you finish all testings on the digital phone, click on 'End' to stop recording signaling messages as shown in Figure 2-14.

TestInfo	Chinfo	T.	Board		78 Channel:	0 Coun	ts:	348	
Ch ChState	0 IDLE		Start Time:	e: 2009-7-15 10:22:50 End Time:					
DTMF BUFFER DKET			No.	wEventCode	deSubReason	dultraInfo	deBataLe	pvBuffer	
LCB INFO CallerId CalledId	₀=EIT 2008	2006	00000000 00000001 00000002 00000003	0x00000008 0x00000000e 0x0000102a 0x00001002	0x00000000 0x00000000 0x00000000 0x000000	0x00000000 0x00000000 0x00000000 0x000000	0x00000000 0x00000000 0x000000000		
Channel Info									
Pbx#odel:	AVAYA)2	Set	6						
Channel Num:	0 F 4. stre	(Start)							
PhoneModel:	6408D+	End							
EnRecord:	🖻 Bit Stream: 🥅 🔤	Cancel	<					>	
Raw Wave:	Advance Set	Sec.	ClearEvents	P	unt Filter	1008 1001	1	Z Exclude	

Figure 2-14

If the button 'Cancel' is clicked, all the files generated in this operation, including both signaling logs and voice files, will be deleted.

Step 11: When you click the button 'End', the dialog box of 'Log Information' pops up as shown in Figure 2-15.

TestInfo	Chinfo	Board	78 Channel:	0 Coun	ts:	6
Ch ChState	0 IDLE	Start Tine:	2009-7-15 10:38:8	Ind Time:	2009-7-1	5 10:36:26
JTHY BUFFER UZY Cf INFO allerId alledId	s=EXT 2008 Bescri Descri Descri	formation be Problem DEET events lost be Operation up and in conversation, th	en 2008 hung up 🕞	deXtraInfo 0x00000000 0x00000000 0x00000000 0x000000	deDataLe 0x00000000 0x00000000 0x00000000 0x000000	pvBuffer
ChannelNus: 0	ата_2 Г 4 чин родн Bit Strees: Г	OK OK	2	1008 1001		3

Write down all abnormal phenomena that you ever met into 'Describe Problem' and 'Describe Operation', such as 'channel state transition is inaccurate', 'fail to detect the calling party number', etc. In the 'Describe Operation', please describe the relevant testings on the monitored digital phone that you did in Step 8 as clear as possible. Then click on 'OK' upon completion.

Step 12: Go back to the main interface and click on 'Exit' to exit the program. See Figure 2-16 below.

TestInfo	ChInfo	T	Board	1	8 Channel:	0 Count	ts:	6
'h 'hState	0 IDLE		Start Time:	2009-1	7-15 10:36:8 g	od Time:	2009-7-1	5 10:36:26
THE BUFFER			No.	wEventCode	deSubReason	dultraInfo	deDataLe	pyBuffer
LD INFO CallerId CalledId	a=EIT 2008	2008	00000000 00000001 00000002 00000003	0x00000000 0x0000000+ 0x0000102+ 0x00001002	0±00000000 0±00000000 0±00000000 0±000000	0x00000000 0x00000000 0x00000000 0x000000	0x00000000 0x00000000 0x00000000 0x000000	
Channel Info								
	ASAYAC2	Set						
	0 Fairs	Start						
PhoneModel:	64060+	End						
EnRecord:	🔽 Bit Stream: 🥅	Cancel	<					\$
Rax Wave:	Advance Sat	Exit	ClearEvents	1	and services of	1008 1001		V Exclud

Figure 2-16

Note: A log file will be generated once the buttons 'Start' and 'End' are pressed. So during the testing process, you need repeat

this operation for each call. And each operation will be recorded to an independent log file for our analysis.

After you finish the signaling recording, please provide the following materials to our technical support people.

1) The version of the Synway driver (you can check through 'Property' of My Computerà 'Device Manager' à 'Property' of board) and the board model;

2) The generated files under the folder 'CasFile' (including signaling logs and voice files);

3) The file 'ShConfig.ini' loaded for the run of CasTool.exe.

3.2 Recording Raw Waves/Raw Data Flows (applicable to Raw Data Acquisition Mode)

The preparation for recording raw waves or raw data flows:

Before you start recording raw waves or raw data flows, you must use the driver configuration program to delete unrelated boards, making sure that only those with raw waves or raw data flows to be recorded are remained, and connect lines only to a specified channel on those boards. Note that for 4-wire digital phones, you need perform two recordings of the raw waves for a same operation. Connect the uplink to the specified channel and do the first recording. Then disconnect the uplink and connect the downlink to the specified channel, and do the second recording. For 2-wire digital phones, one recording is enough.

The recording of raw waves or raw data flows should be performed in Raw Data Acquisition Mode which can be set by the configuration program in driver. For DST A-type boards, after ticking the check box 'Rec Raw Mode', you need to use the button 'set' to evaluate the module type with the PBX model that you choose. See Figure 2-17 below. For DST B-type boards, just tick the check box 'Rec Raw Mode'. See Figure 2-18 below.

oduleId	Installed	Туре	Version
	YES YES YES YES	UNICHOW UNICHOW UNICHOW UNICHOW	0.0 0.0 0.0 0.0
		2 MI	
SET PBX A Set F		tel 4200/4400 💌	🔽 DEvent Update:
Set Phon	e Type 0,0,0), 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,	0
Bin Void	se Format	🕫 A-law - C U-law	Set
			Rec Raw Mode

Figure 2-17 For A-type boards

loduleId	Installed	Туре	Version
	YES YES YES	Avaya Definity 2W Avaya Definity 2W Avaya Definity 2W	1,0 1,0 1,0
SET PBX A Set F	bx Avaya		DEvent Updates
<u></u>		0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,	3, 8, 8, 8, 8, 8, 8, 8
D D D	law Mode		

Figure 2-18 for B-type boards

Step 1: Start CasTool.exe and tick the check box after 'Raw Wave' (for B-type boards) or 'Raw Bits' (for A-type boards).

Note: What displays on the interface for B-type boards is 'Raw Wave' as shown in Figure 2-19, while that for A-type boards is 'Raw Bits' as shown in Figure 2-20.

TestInfo	Chinfo		Bo ar d	1	78 Channel:	1: Counts:				
Ch ChState	0 OFFLINE		Start Time:		2	Ind Time:				
DIME BUFFER DEEY LED IMFO CallerId CalledId	ET D INFO LlerId		<u>¥0.</u>	wEventCode	dwSubReason	dvätralafo	deDatale	pvBuffer		
Channel Info FbxModel:		Set								
ChannelNum:	P. F. 4 size	Start								
		Zrol								
PhoneModel:			<					>		

Figure 2-19 for B-type boards

Note: Before running CasTool to record raw waves on a DST Btype board, you may need to add configuration items about analog switch to the file ShConfig.ini. For detailed information, contact our technicians.

festInfo	Chinfo		Board	4071	% Channel:	Coun	ts:		
h hState	0 OFFLINE	0 OFFLINE		End Time:					
THE BUFFER GEY CD INFO allerId alledId			80.	wEventCode	dwSubReason	dwItraInfo	dxDataLe	pvBuffes	
Channel Info PhuModel: ChannelNum:	C 4 size	Set Start]						
PhoneModel:	Bit Stress: [Zrd						,	

Figure 2-20 for A type boards

While recording raw data flows on a DST A-type board, you may need to set some parameters. Click on 'Advance Set' to go into the dialog 'Advance Setting' as shown in Figure 2-21.

Stat DAC	Ctrl Voltage : d300
\leq	(HEX SsmSetRecRawCtrl1)
Free	1 Div Radio: 0400
	SsmSetRecRawCtr12

Figure 2-21

Note: The values of these two parameters shown above should be determined by actual situations. For detailed information, contact our technicians.

Step 2: Fill in the PBX and phone models and the specified channel number respectively for the items 'PbxModel', 'PhoneModel' and 'ChannelNum' as shown in Figure 2-22. Such information will be saved to the end of the recorded data file.

estInfo	ChInfo	T	Board	19	0 Channel:	Coun	ts:	
h hState	0 OFFLINE		Start Time:	1	ž	Ind Time:		
THE BUFFER HEY CD INFO allerId alledId			No.	wEventCode	dwSubReason	dwätraInfo	deBataLe	pvBuffer
Channel Info PbxModel: AVAYA ChannelNum 0	2	Set Start						
PhoneModel 6408D4 EnRecord: 17 1	Bit Stream: Г	End	<			1		8

Figure 2-22

22

Step 3: Click on the button 'Set' as shown in Figure 2-23.

		Start Time:	wEventCode	d#SubReason	Ind Time: deltraInfo	deDataLe	nyBuffer
		No.	wEventCode	dsSubReason	deltralafo	deBataLe	pyBuffer
F tains	Set Start	>					
	End Cancal	<					5
	Pićojina -	reas: F	read:	reant F	read:	F 4 vira Zid Zid Cancel	F 4 size Zad

Step 4:	Now the 'Start' button is activated as shown in Figure 2-24.	

TestInfo	Chinfo	T	Board	1	8 Channel:	Coun	ts:	
Ch ChState			Start Time:		2	Ind Time:		9
DTMY BUFFER DEFT LED INFO CallerId CalledId			No.	wEventCode	dwSubReason	d#ItraInfo	deDataLe	pvBuffer
Channel Info FbsWodel: NVANA,2 ChannelHum:		Set Start						
PhoneHodel:	Stream: I	End Cancel		(B)				2
	vance Set	Exit	ClearEvents	in the				T Include

Figure 2-24

Step 5: Click on the 'Start' button as shown in Figure 2-25.

TestInfo	Chinfo		Board	6	78 Channel:	Cour	its:	
Th ThState			Start Time:		2	Ind Time:		
DTME BUFFER UGET LED INFO CallerId CalledId			80.	wEventCode	dwSubReason	dvätralnfo	deDataLe	pvBuffer
ChannelNum:	nk2	Set Start						
PhoneModel:	Bit Streen: Г	Zid Cancel	×					5

Step 6: Then the right area shows the size of the currently recorded data file as shown in Figure 2-26. Normally, the sampling rate for B-type boards is about 10M/S while that for A-type boards depends on parameter settings.

estInfo	Chinfo		Board	78 Channel:	Counts:	
i State MF BUFFER ET D INFO LilerId LilerId LilerId			Start Time:	2009-7-15 13:31:13 End	Time:	
ChannelBus:	To a sure	Set Start End				
PhoneModel: 640	Bit Streen: [Cancel				3
InRecord:						

Figure 2-26

Step 7: Click on the 'End' button to stop acquiring raw data as shown in Figure 2-27.

TestInfo ChInfo		Board	78 Channel:	Counts:	
h Sötate UTBF BUFFER MET LED INFO AllerId AlleId AlleId		Start Time:	2009-7-15 13:31:13 gnd T	ine:	
Channel Info Phattodel: [//ATA_2 ChannelNas:]] [] [] [] [] [] [] [] PhonelBodel:]	Set Start End				3
EnRecord: Bit Stream: Rem Wave: Advance Set	Cancel		ut Pause Event Filter		- Esclude

Figure 2-27

Step 8: Then the dialog box of 'Log Information' pops up as shown in Figure 2-28. Fill in the two items 'Describe Problem' and 'Describe Operation' and click on 'OK' upon completion. All the information you write will be saved to the end of the data file for our developer's analysis.

TestInfo	ChInfo	Board	78 Channel:	Counts	s [
'h hState		Start Time:	2009-7-15 13:31:13 g	ad Time:	2009-7-15 13:31:33
IMF BUFFER. RET	Log Info	rmation			
CD INFO allerId alledId	Describ	e Problem			
alledid	Reed su	pport new pbx	2		
			-	-	
	Describ	e Operation			
	Dick up	, dial tone, hang up D	2		
Channel Info					
PbxWodel: AVATA_2			<u></u>	-	
ChannelNum:	I [™] ≤ six	(OK)			
PhoneBodel: 5006D+					
EnRecord: 🦵 Bi	t Stress: T	Acel			2
Bax Wave: 🔽 🕖	dvance Set	GV ClearZvents 2	Vent Fours Event Filter	I.	T Ecolud

Figure 2-28

Step 9: Click on the 'Exit' button to exit CasTool.exe as shown in Figure 2-29.

TestInfo	Chinfo	T	Board		Counts:
Ch JAState DINF BUFFER NET LED INFO LLD INFO LallerId CalledId			Start Tine:	2009-7-15 13:31:13 End Time	a: 2009-7-15 13:31:33
Channel Info FbsModel: (AV) ChannelHum: ()	VA.2	SetStart			
PhoneModel: 640 EnBecord: Г	Bit Streen: 🏴	Gancel	3 0		2
	Advance Set	-		nt Faune Event Filter	Exclude

Figure 2-29

After the recording of raw waves or raw data flows is stopped, a folder named 'CasFile' will be generated under the same directory of the program to store the recorded waves or data flows. All the files generated therein are named in the form of 'hour_minute_second', e.g. 16_23_18.pcm.

After you finish recording raw waves (for B-type boards) or raw data flows (for A-type boards), please provide the following materials to our technical support people.

1) The version of the Synway driver (you can check through 'Property' of My Computerà 'Device Manager' à 'Property' of board) and the board model;

2) The generated files under the folder 'CasFile' (*.pcm).

3.3 Recording Bit Streams (applicable to Common Working Mode)

Note: This feature is only supported by DST B-type boards.

Before you start recording bit streams, you must use the driver configuration program to delete unrelated boards, making sure that only those with bit streams to be recorded are remained, and connect lines only to Channel 0 on those boards.

The recording of bit streams should be performed in Common Working Mode. After running CasTool.exe, tick the check box 'Bit Stream' first as shown in Figure 2-30, and then follow Step 2 and subsequent steps in Section 4.2 as the operations are the same.

TestInfo	ChInfo	Board	1	78 Channel:	Cour	its:	
Ch ChState	0 IDLE	Start Time:	[2	nd Time: 「		
DIMF BUFFER DREF LED INFO CallerId CalledId		<u>No.</u>	vEventCode	dwSubReason	dwXtraInfo	deDatale	pvBuffer
Channel Info Fbuffodel: AVAJ ChannelNus:	A2 Fid vire						
PhoneModel 6400 EnRecord:	Bit Stream: P				1		2

Figure 2-30

A file will be generated after finish recording bit stream. This file is stored under the folder 'CasFile'. The folder 'CasFile' has a same directory of the program. The data file is named in the form of 'hour-minute-second', e.g. 16_23_18.bit.

After you finish the signaling recording of the bit stream, please provide the following materials to our technical support people.

After the recording of bit streams is stopped, a folder named 'CasFile' will be generated under the same directory of the program to store the

recorded bit streams. All the files generated therein are named in the form of 'hour_minute_second', e.g. 16_23_18.bit.

After you finish recording bit streams, please provide the following materials to our technical support people.

3) The version of the Synway driver (you can check through 'Property' of My Computerà 'Device Manager' à 'Property' of board) and the board model;

4) The generated files under the folder 'CasFile' (*.bit).

4 Troubleshooting

If you have questions in using DST boards, please replace them with DST B-type boards to diagnose the system following the flow shown below.



Notes:

1. You need to add the configuration item AnalogCtrl before recording original waveforms. See detailed information about AnalogCtrl, read SynCTI Programmer's Manual.

2. If you meet problems in using DST A-type boards, please replace them with B-type boards and diagnose the system according to the above flow diagramIf you have questions in using DST boards, please

replace them with DST B-type boards to diagnose the system following the flow shown below.



1) Pick up Ext0. Dial '123456789*0#' in turn. Push functional keys from the top down and from left to right. Then hang up Ext0.

2) Start a call from Ext0 to Ext1. Directly hang up Ext0 once Ext1 begins to ring.

3) Pick up Ext1. Start a call from Ext0 to Ext1. Hang up Ext0 once it receives busy tones.

4) Start a call from Ext0 to Ext1. Pick up Ext1 and answer the call once it rings. Hang up Ext0 first. Then hang up Ext1.

5) Start a call from Ext0 to Ext1. Pick up Ext1 and answer the call once it rings. Hang up Ext1 first. Then hang up Ext0.

6) Start a call from Ext0 to Dir0. Directly hang up Ext0 once Dir0 begins to ring.

7) Pick up Dir0. Start a call from Ext0 to Dir0. Hang up Ext0 once it receives busy tones.

8) Start a call from Ext0 to Dir0. Pick up Dir0 and answer the call once it rings. Hang up Ext0 first. Then hang up Dir0.

9) Start a call from Ext0 to Dir0. Pick up Dir0 and answer the call once it rings. Hang up Dir0 first. Then hang up Ext0.

10) Start a call from Ext1 to Ext0. Directly hang up Ext1 once Ext0 begins to ring.

11) Start a call from Ext1 to Ext0. Pick up Ext0 and answer the call once it rings. Hang up Ext1 first. Then hang up Ext0.

12) Start a call from Ext1 to Ext0. Pick up Ext0 and answer the call once it rings. Hang up Ext0 first. Then hang up Ext1.

13) Start a call from Dir0 to Ext0. Directly hang up Dir0 once Ext0 begins to ring.

14) Start a call from Dir0 to Ext0. Pick up Ext0 and answer the call once it rings. Hang up Dir0 first. Then hang up Ext0.

15) Start a call from Dir0 to Ext0. Pick up Ext0 and answer the call once it rings. Hang up Ext0 first. Then hang up Dir0.

Appendix A Example of Signaling Content

The format of the output log files:

0234 10:4:48 DST ch[0] CmdType[D] Len[19] Data--> 6a 13 80 4d 61 72 20 31 32 20 31 32 3a 34 33 20 70 6d 20 0235 10:4:51 DST ch[0] CmdType[D] Len[1] Data--> 43 0236 10:4:51 DST ch[0] CmdType[D] Len[1] Data--> 1f 0237 10:4:51 DST ch[0] CmdType[U] Len[1] Data--> ce 0238 10:4:55 DST ch[0] CmdType[D] Len[1] Data--> 5c PBX Model: Norstar Phone Model: M7310 Describe Problem: 'Caller ID not received...' Describe Operation: 'Call out...'

Appendix B Technical/sales Support

Thank you for choosing Synway. Please contact us should you have any inquiry regarding our products. We shall do our best to help you.

Headquarters

Synway Information Engineering Co., Ltd

http://www.synway.net/

9F, Synway D&R Center, No.3756, Nanhuan Road, Binjiang District, Hangzhou, P.R.China, 310053

Tel: +86-571-88860561

Fax: +86-571-88850923

Technical Support

Tel: +86-571-88864579

Mobile: +86-13735549651

Email: techsupport@sanhuid.com

Email: techsupport@synway.net

MSN: scycindy_sh@hotmail.com

Sales Department

Tel: +86-571-88860561

Tel: +86-571-88864579

Fax: +86-571-88850923

Email: sales@synway.net