

## ST2829AX + ST1901B

### Example for parameterization

#### To be tested:

- All three windings (1P, 2S) on inductance
- Total-PASS, if all three are within their respective

#### Vorgehensweise

Connection of the scanning fixture ST1901B to the transformer tester ST2829AX:

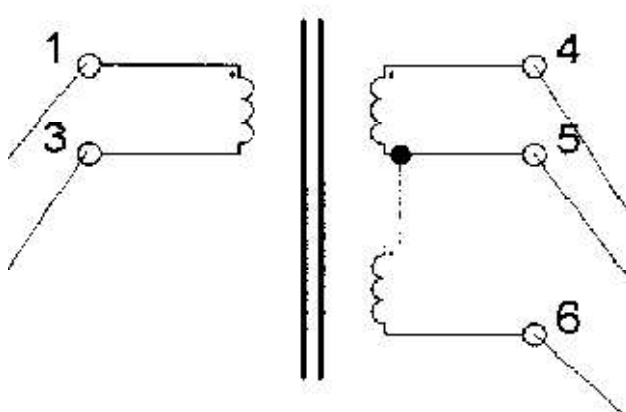
1. Scanner cable



## 2. Test cable



## Transformer

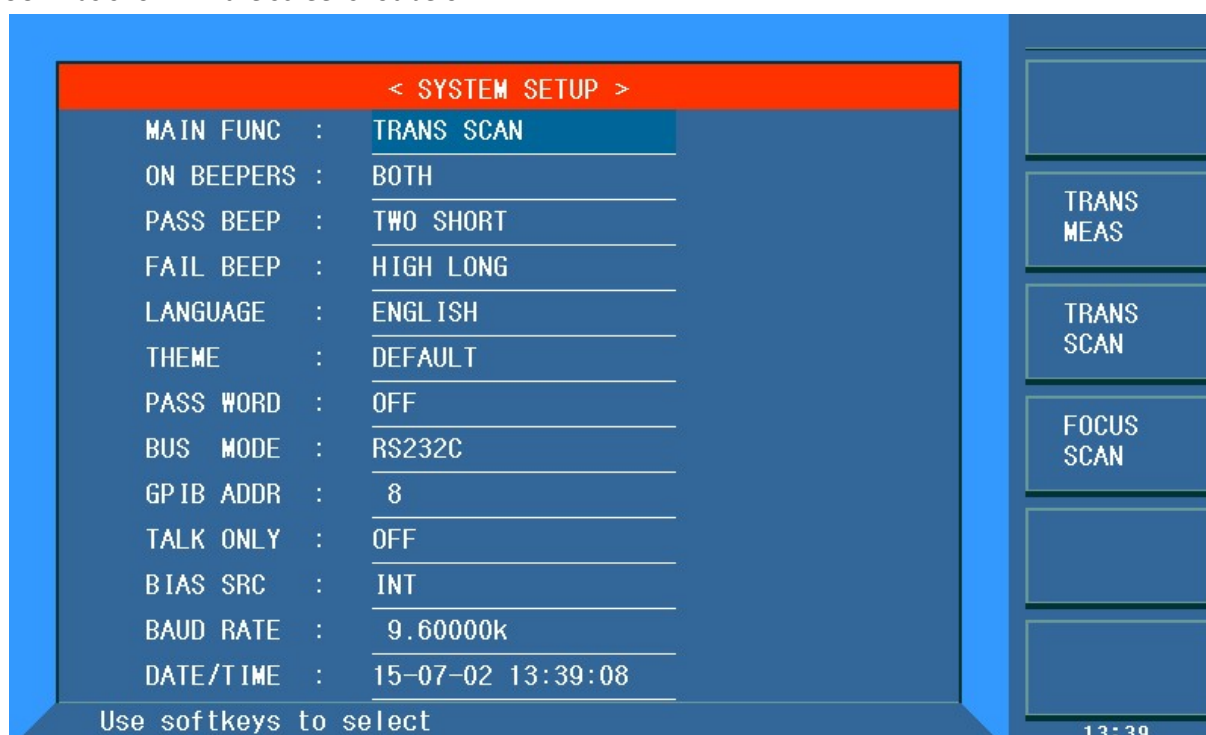


Primary winding: 1-3, connected to 8-10 of the ST1901B

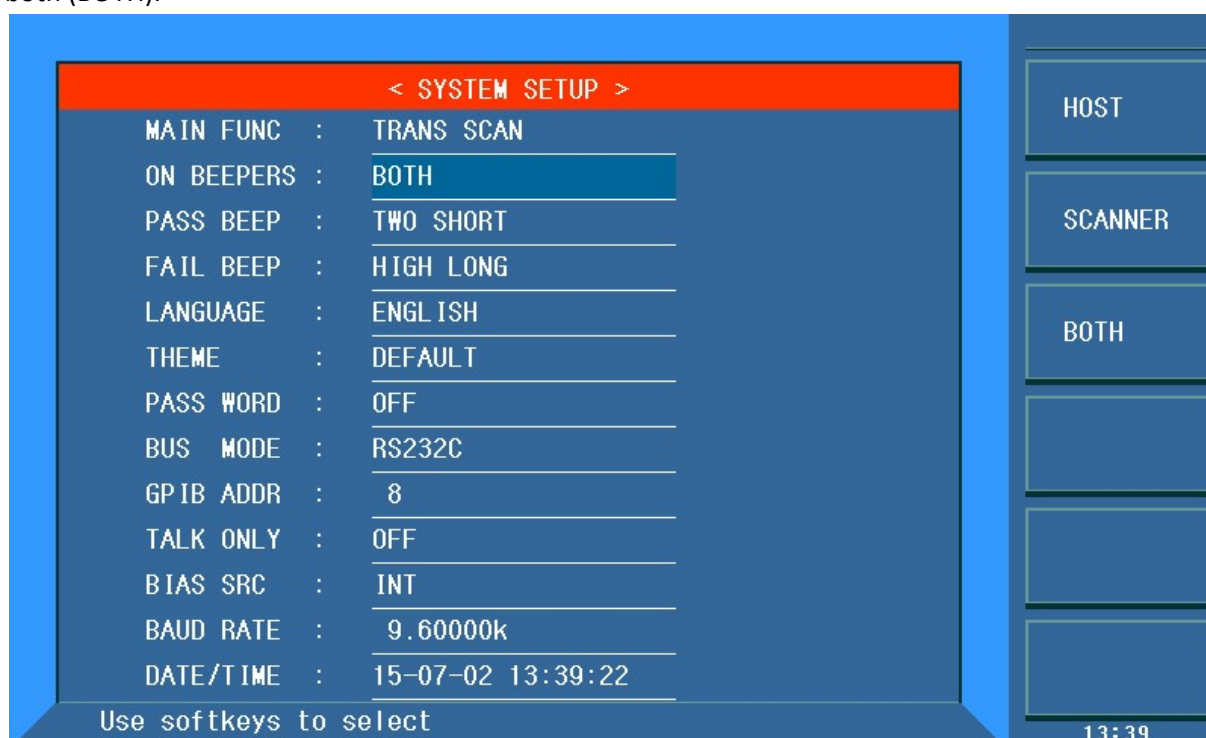
Secondary windings: 4-5-6, connected to 11-12-13 of the ST1901B

## Parameterization

Press the softkey [SYSTEM], to get to page <SYSTEM SETUP>. If not already set, use the cursor keys or the rotary knob to move the cursor to the MAIN FUNC field and use the softkeys to set it to TRANS SCAN as shown in the screenshot below.



If necessary, move the cursor to the ON BEEPERS field to choose whether the acoustic notification of the result should be via the basic device ST2829X (HOST), the ST1901 scanning fixture (SCANNER) or both (BOTH).



The notification tones can be set in the following fields PASS BEEP and FAIL.

< SYSTEM SETUP >	
MAIN FUNC :	TRANS SCAN
ON BEEPERS :	BOTH
PASS BEEP :	TWO SHORT
FAIL BEEP :	HIGH LONG
LANGUAGE :	ENGLISH
THEME :	DEFAULT
PASS WORD :	OFF
BUS MODE :	RS232C
GPIB ADDR :	8
TALK ONLY :	OFF
BIAS SRC :	INT
BAUD RATE :	9.60000k
DATE/TIME :	15-07-02 13:39:52

Use softkeys to select

HIGH LONG

HIGH SHORT

LOW LONG

TWO SHORT

OFF

13:39

Press the softkey [SETUP], to get to the page <TRANSFORMER ID>.

< TRANSFORMER ID >		
TRANSFORMER ID :	12.6	
PRIMARY NUMS :	001	SET(S)
SECONDARY NUMS :	002	SET(S)
RESCAN INTERVAL :	---	(x100ms)
SCAN DISP MODE :	PASS/FAIL	
FAIL RESCAN :	---	TIMES
DCR MEAS DELAY :	---	(x10ms)
DCR OVER DELAY :	---	(x10ms)
IBIAS ON DELAY :	---	(x10ms)
IGNORE NOM :	FORCE DEV	
TRIGGER DELAY :	---	(x10ms)
CYLINDER CTRL :	ON	

Use softkeys to select

TRANS ID

PIN SETUP

TEST CONDITION

STAT

FILE MANAGE

TOOLS

13:33

To create a new configuration, press the softkey TOOLS and CLEAR RAM. Confirm with YES.

< TOOLS >

AUTOTRIG DELAY: OFF	SAVE LOG AS : CSV
SAVE LOG MODE : ALL	DC BIAS FACTOR: 1.0000
COPY PINOFFSET: 024	
PASS DISP TIME: ON	
PASS DISP SIZE: SMALL	
COMMAND EXTRIG: OFF	
NO MINUS DEV : OFF	
SCAN DISP FONT: BIG	
EXT RESET FUNC: RESET	
SCAN PAGE FROM: OFF	
SCAN PAGE NUMS: 01	
RESCAN IF FAIL: OFF	

Use softkeys to select

13:40

SCANNER TEST

CLEAR RAM

PIN LABEL

HANDLER MODE

EXIT

If necessary, select the softkey PIN LABEL to access the <TRANSFORMER PIN LABEL> page. Here you can enter the names of the transformer pins at the corresponding pin positions if they are not numbered „normally“.

Turn back to the page <TRANSFORMER ID> by pressing 2xEXIT.

Press the right cursor button or using the rotary knob one step further to select the field TRANSFORMER ID and enter a name for the transformer using the number keys and softkeys. Then press the [ENTER] key.

For the next step, enter the number of primary and secondary windings by switching to the corresponding field with the cursor keys or the rotary knob. In this case, set PRIMARY NUMS to 1 and SECONDARY NUMS to 2. Confirm the values again with [ENTER] or by pressing the rotary knob.

Then press the PIN SETUP softkey followed by PIN TO FIXTURE to get to the <ALLOCATE PIN TO FIXTURE>-page.

If the SCANNER softkey is not assigned 1901X, press it and switch to 1901X.

Press the rotary knob and set the number of transformer pins (6). Confirm it by pressing the rotary knob again.

Use the cursor keys or the wheel to select the position of pin 1 and press [1] there, followed by [ENTER]. With the default setting ALLOCATE = AUTO, the remaining pins are automatically selected



based on the set direction of rotation DIRECTION.

**< ALLOCATE PIN TO FIXTURE >**

TOTAL TRANS PINS: 006

020	019	018	017	016	015	014	013	012	011
							006	005	004
							001	002	003
001	002	003	004	005	006	007	008	009	010

Enter value or select

DIRECTION  
**ANTICLOCK**

SCANNER  
**1901X**

ALLOCATE  
**AUTO**

CLEAR  
TABLE

FILE  
MANAGE

EXIT

12:01

To get back to the <TRANSFORMER PIN SET>, press EXIT or call up with [SETUP] and the softkey PIN SETUP.

**< TRANSFORMER PIN SET >**

PRI: 1	TRANSFORMER	FIXTURE
PHASING	+   -	+   -
PRI.	<b>001</b> 003	008   010
SEC. 1	004   005	011   012
SEC. 2	005   006	012   013

Enter value or select

SERIES  
PINSET

PARALLEL  
PINSET

PIN TO  
FIXTURE

PRI:  
**1** ↻

TEST  
CONDITION

12:21

Enter the assignment of the transformer pins to the windings by using the rotary knob or the numeric keypad and confirm with the [ENTER] key. If you have defined more than one primary winding, use the PRI: softkey to toggle the assignment pages for the various primary winding groups

The pin assignment of the ST1901 on the right side is automatic.

If you have defined pseudo windings that consist of a series or parallel connection of several windings, you can use the SERIES PINSET or PARALLEL PINSET softkeys to call up subpages on which you can specify which pins are to be short-circuited by the test adapter for each defined winding and during which test this is to be done.

Now press the TEST CONDITION softkey to define the tests to be performed.

Move the cursor to the right column to activate the required tests and change the order if necessary. In this case only Lx will be set to ON by softkey or rotary knob. Then change frequency and voltage. With the MULTI LEVEL softkey, you can call up a subpage on which the voltage/frequency can be set separately for each defined winding. (To reset this setting, enter a new value in the corresponding field on the TEST CONDITION page using the numeric keys). Use the ALC softkey to activate voltage readjustment, if necessary.

The screenshot shows the 'TEST CONDITION' screen. At the top is a red header with the text '< TEST CONDITION >'. Below this is a table with four columns: FUNC, FREQ, LEVEL, and  $\sqrt{\text{ }} / \text{SEQ}$ . The table lists various test functions and their parameters. The 'Lx' row is highlighted with a blue background. To the right of the table is a sidebar with several softkey buttons: 'EQUI Lx' (with a red 'Ls' indicator), 'BIAS SETUP', 'LIMIT SETUP', 'SRC RES' (with a red '100Ω' indicator), and two empty buttons. At the bottom of the screen, it says 'STEP SEQ : -Lx-' and 'Use softkeys to select'. A digital clock in the bottom right corner shows '12:41'.

FUNC	FREQ	LEVEL	$\sqrt{\text{ }} / \text{SEQ}$
TURN	1.0000kHz	1.000 V	3
Lx	10.000kHz	100.0mV	$\sqrt{\text{ }} 1$
Lk	10.000kHz	100.0mV	2
Cx	10.000kHz	100.0mV	5
Zx	10.000kHz	100.0mV	8
ACR	10.000kHz	100.0mV	7
DCR			4
PS			6
BAL			10
LED			9

STEP SEQ : -Lx-  
Use softkeys to select

12:41

Move the cursor to the Lx field. Now you can use the softkeys to set DC BIAS, the limits and the internal resistance of the source. Press LIMIT SETUP to enter the limits for Lx. To do this, use the numeric keys and terminate the entry with the softkey showing the appropriate unit.

[Lx LIMIT SETUP]

PRI: 1	NOM (H)	LOW (H)	HIGH (H)
001 – 003	400.00μ	290.00μ	515.00μ
004 – 005	1.5000m	1.1200m	1.9600m
005 – 006	220.00μ	173.00μ	307.00μ

Enter value or select

LMT MODE

ABS

PRI:

1

LIMIT Q  
SETUP

CLEAR  
TABLE

FILE  
MANAGE

EXIT

12:54

The setup is now complete. If you want to save this, press the FILE MANAGE softkey or the [FILE] key to call up the <FILE MANAGE> page, select a memory location, press the STORE softkey and confirm, then enter in the bottom Screen line a file name, while the entered transformer ID is specified. If necessary, change it with numeric keys and softkeys and confirm with [ENTER]. If you wish to save to a USB stick instead, change with the EXT softkey. FILE on this, if necessary, use the SUB DIR softkey to change to the directory marked by the cursor, or return with PARENT DIR and press the STORE softkey. Here, too, the file name is requested in the bottom line and confirmed with [ENTER].

[ TRANS FILES LIST ]

E:\ PIC

FILE/FOLDER	TIME
011  0702_011.GIF	15/07/02 12:54
012  12.6.TRS	15/07/02 13:19
013	
014	
015	
016	
017	
018	
019	
020	

Use softkeys to select

LOAD

STORE

DEL

COPY TO

I:

PARENT  
DIR

INT. FILE

13:20



## Test

Press the [DISP] button to go to the actual test page.

ID : TH-20-1

PIN	Lx(H)	Q	ACR( $\Omega$ )	TURN_V	Zx( $\Omega$ )	DCR( $\Omega$ )	Cp(F)	Lk(H)	P	B
0001-002	3.9852 $\mu$	250.45 $\mu$	99.988	100.00	99.991	2.8377	001-013	001-002	+	
1003-004	3.8808 $\mu$	243.89 $\mu$		89.683m		2.8373			+	N
2005-006	4.4994 $\mu$	282.81 $\mu$		89.541m		2.8371			+	N
3008-007	2.4382 $\mu$	153.24 $\mu$		87.346m		2.8369			+	
4003-006	4.0125 $\mu$			87.490m					+	
5003-004	4.5425 $\mu$		99.992		99.993					
BAL	-0.619 $\mu$									
PS	002-003	004-005	006-009	010-011	012-013					
LED	001-002	Vf=611.77m	Ir=129.77 $\mu$	003-004	Vf=2.0304	Ir=117.20 $\mu$				

Use softkeys to select

08:48

LOAD STD.  
OFF

DEVIATION  
ON

SPEED:  
FAST

PRI.  
1

TEST FAIL  
Continue

SAVE LOG  
OFF

The loaded transformer ID is displayed in the upper left corner. If you want to load a different parameterization, press the [FILE] or [.] key to display the <FILE MANAGE> page. Select a file with the cursor and press the LOAD softkey to load it. Then press [DISP] again.

Now insert the transformer into the ST1901B, close the clamping device and press the red [START] button. The test result is indicated by LED and sound.

To log the test results to the USB stick, press the SAVE LOG softkey. The SAVE LOG changes from OFF to ON. The files are stored in the \CSV directory on the stick.