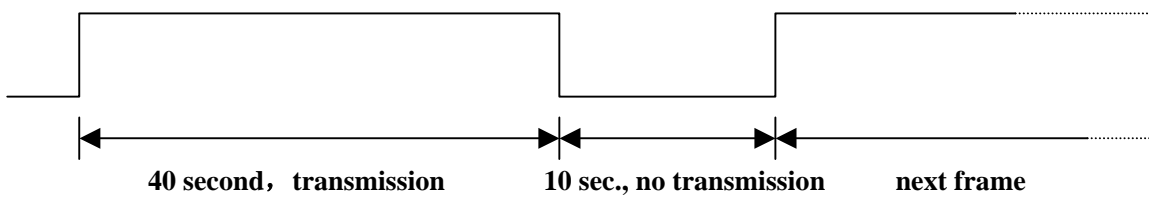


# XW-1 Telemetry Format

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## 1、 XW-1 telemetry frame:



## 2、 XW-1 telemetry Modulation and Encode:

- (1) Modulation: CW;
- (2) Transmitting Speed: 15wps ;
- (3) Numeric telemetry data encode:

Numeric telemetry	Encode Character
0	T
1	A
2	U
3	V
4	4
5	E
6	6
7	B
8	D
9	N

**2、 Content of a XW-1 telemetry frame:**

<b>Transmission Sequence</b>	<b>Content of Transmission</b>	<b>Note</b>	<b>Remark</b>
<b>1</b>	<b>BJ1SA</b>	<b>Satellite Callsign</b>	<b>Standard Morse Code</b>
<b>2</b>	<b>XW</b>	<b>Identifier</b>	<b>Standard Morse Code</b>
<b>3</b>	<b>XW</b>	<b>Identifier</b>	<b>Standard Morse Code</b>
<b>4</b>	<b>CH1</b>	<b>Telemetry Data Channel 1</b>	<b>Encoded Morse Code</b>
<b>5</b>	<b>CH2</b>	<b>Telemetry Data Channel 2</b>	<b>Encoded Morse Code</b>
<b>6</b>	<b>CH3</b>	<b>Telemetry Data Channel 3</b>	<b>Encoded Morse Code</b>
<b>7</b>	<b>CH4</b>	<b>Telemetry Data Channel 4</b>	<b>Encoded Morse Code</b>
<b>8</b>	<b>CH5</b>	<b>Telemetry Data Channel 5</b>	<b>Encoded Morse Code</b>
<b>9</b>	<b>CH6</b>	<b>Telemetry Data Channel 6</b>	<b>Encoded Morse Code</b>
<b>10</b>	<b>CH7</b>	<b>Telemetry Data Channel 7</b>	<b>Encoded Morse Code</b>
<b>11</b>	<b>CH8</b>	<b>Telemetry Data Channel 8</b>	<b>Encoded Morse Code</b>
<b>12</b>	<b>CH9</b>	<b>Telemetry Data Channel 9</b>	<b>Encoded Morse Code</b>
<b>13</b>	<b>CH10</b>	<b>Telemetry Data Channel 10</b>	<b>Encoded Morse Code</b>
<b>14</b>	<b>CH11</b>	<b>Telemetry Data Channel 11</b>	<b>Encoded Morse Code</b>
<b>15</b>	<b>CH12</b>	<b>Telemetry Data Channel 12</b>	<b>Encoded Morse Code</b>
<b>16</b>	<b>CH13</b>	<b>Telemetry Data Channel 13</b>	<b>Encoded Morse Code</b>
<b>21</b>	<b>XW</b>	<b>Identifier</b>	<b>Standard Morse Code</b>
<b>22</b>	<b>XW</b>	<b>Identifier</b>	<b>Standard Morse Code</b>

#### 4、 Content of XW-1 telemetry datas:

Channel	Parameter	Type	Data Format		Description and Equation	Unit
			N(min)	N(max)		
CH1	PA Output RF Switch Status	Status	000	111	111 =PA2 Works (Beacon only) 000 = PA1 Works (Transponder and Beacon)	
CH2	Transponder Working Status	Status	000	111	000= Beacon only 001= Beacon and FM Transponder 010= Beacon and Linear Transponder 100= Upload Software	
CH3	Transponder Temperature	Data	099	199	First character =0, T= -N First character=1, T= +Last Two character	℃
CH4	Beacon RF Output Power	Data	000	999	$P=N$	mW
CH5	Beacon Power Supply Voltage	Data	000	999	$V=N/100$	V
CH6	Receiver Power Supply Current	Data	000	999	$I=N$	mA
CH7	Linear Transponder AGC Voltage	Data	000	999	$V=N/100$	V
CH8	Transponder RF Output Power	Data	000	999	$P = N \times 3$	mW
CH9	Transponder PA Power Supply Current	Data	000	999	$I=N$	mA
CH10	Linear Transponder Up converter Power Supply Current	Data	000	999	$I=N$	mA
CH11	Linear Transponder Power Supply Voltage	Data	000	999	$V=N/100$	V
CH12	FM/Digital Store-forward Transponder Digital Power Supply Current	Data	000	999	$I=N$	mA
CH13	FM/Digital Store-forward Transponder Power Supply Voltage	Data	000	999	$V=N/100$	V