Direct connections, Digipeaters and Scripts

Winlink Express supports three types of packet connections:

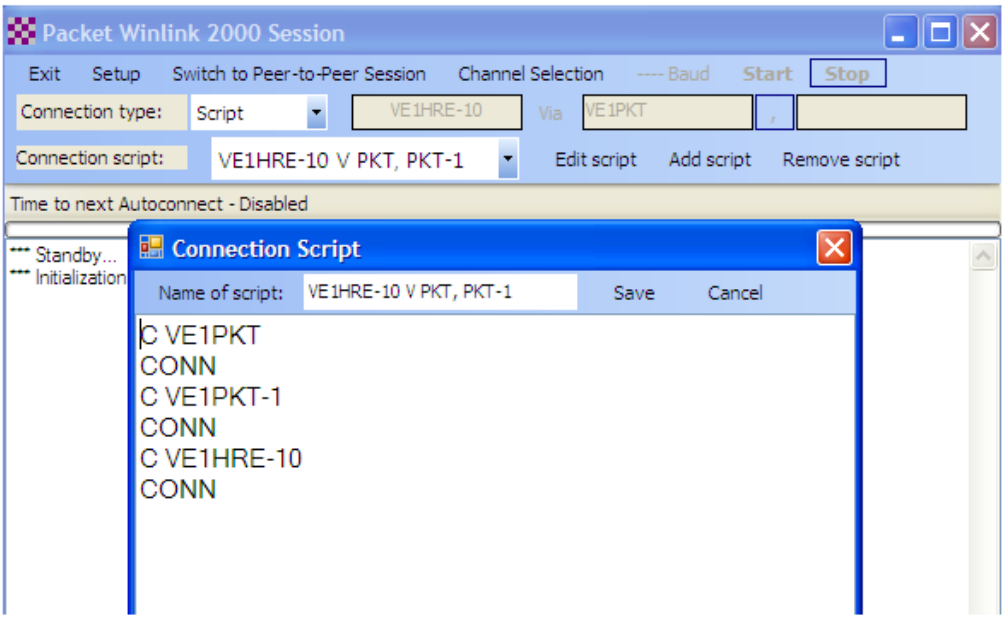
1. **Direct**. For a direct connection simply enter the call sign of the RMS you want to connect to (or the target station for a peer-to-peer connection).

2. **Digipeater.** Specify the call sign of the destination RMS in the first field and one or two digipeater call signs in the via fields.

3. **Script**. Packet script connections use a connection "script" to guide the connection path through a packet network.

Connection Scripts

If a "Script" type connection is selected, then you must create or select a packet script to guide the connection. To create a new script, click "Add script" to open the script edit screen.



Packet scripts contain three types of lines:

1. Command lines beginning with the character "!" (exclamation point). Command lines are optional. If they are not specified, default values are used. Command lines may be placed anywhere in the script. Currently, three commands are defined:

!CONNECTTIME *seconds* -- This specifies the number of seconds allowed for each connection through the network. The default value is 60.

!TOTALTIME *seconds* -- This specifies the total number of seconds that will be allowed for the entire script to be completed. The default value is 300.

!WAITFOR *text* -- Specifies that the script is to pause until the specified text is found in the response from the packet server.

2. Connection/Response pairs -- Other than command lines, the script must have an even number of lines. The first line of each pair is the command to be sent to the network to establish the connection to the next node. The second line of the pair is the response that the script will wait for. Note, the response may be long, and the script will proceed once the specified response is found anywhere in the response from the packet node.

The first connection/response pair specifies the initial, entry-point packet node into the network. The last connection/response pair specifies the node that has the RMS server (Winlink session) or the destination packet station running the client program (peer-to-peer connections).

When building packet network scripts, keep the script as simple as possible. Use "C" for "CONNECT", and "CONN" for "CONNECTED".
Sample packet network Netrom (X1J4, TheNet, K-Net, BPQ, etc.) connect scripts are shown below.
In this example, Winlink Express VE1YZ-8 connects through network node VE1PKT to RMS Packet server VE1HRE-10.

```
C VE1PKT
CONN
C VE1HRE-10
CONN
```

In this example, Winlink Express VE1YZ-8 connects through network nodes VE1PKT and VE1PKT-1 (alternate route), to RMS Packet server VE1HRE-10.

```
C VE1PKT
CONN
C VE1PKT-1
CONN
C VE1HRE-10
CONN
```

In this example, Winlink Express VE1YZ-8 connects through BPQ network node VE1DAR port 4, to RMS Packet server VE1HRE-10.

```
C  VE1DAR
CONN
C  4 VE1HRE-10
CONN
```

Kantronics KA-Nodes are somewhat more complex in the construction of the connect script. When initially connected to a KA-Node (VE1EPC-7 in this example), the KA-Node responds with:
###CONNECTED TO NODE VE1EPC-7(VE1EPC) CHANNEL A
ENTER COMMAND: B,C,J,N, OR HELP ?

In this case, the "!WAITFOR" command line is used in the script to look for the last unique character, or text string, before proceeding with the next connect line in the script. In the menu above, the "?" at the end of the menu line is used as the desired response in the script.

When the KA-Node connects to the next node or station, the KA-Node responds with:
###LINK MADE
"LINK" is used as the desired response in the script.

In the KPC-4 (and other Kantronics dual port TNCs), "X" (XCONNECT) may be used to initiate the connect on the opposite port.

In this example, Winlink Express VE1YZ-8 connects through KA-Node VE1EPC-7 to RMS Packet server VE1HRE-10.

C VE1EPC-7
CONN
!WAITFOR ?
C VE1HRE-10
LINK

In this example, Winlink Express VE1YZ-8 connects through KA-Node VE1EPC-7 to network node VE1PKT, then to RMS Packet server VE1HRE-10.

C VE1EPC-7
CONN
!WAITFOR ?
C VE1PKT
LINK
C VE1HRE-10
CONN

NOTE:

When using a digipeater, there is no connection script involved. You simply select the connection type as "digipeater", and then fill in the digipeater call signs in the via path. You ***cannot*** connect to a digipeater.You use a connection script when you are using network nodes to complete the connection. Network nodes operate differently than digipeaters. You do connect to a network node, and then you tell the network node where to connect next in the sequence. The node will report back the progress. The command and responses can vary depending on the type of node you are working with (could be netrom, or kanode, etc.), this is why you need a script. *Connection scripts do not allow a mix of network nodes and digipeaters in the first line of the script.*